## (Murgn's lluiurcity Tillnary

KINGSTON. ONTARIO

## CALENDAR

OF

# Qureen's Collese and Unuresesity 

KINGSTON, CANADA.

FOR Ti̇iE YEAR 1907-1908.

INCORPORATED BY ROYAL CHARTER A.D. 1841.

## KINGSTON :

PRINTED FOR THE UNIVERSITY BY THE BRITISH WHIG. 1907.

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## ACADEMIC YEAR.

## 1907.

May 23-Notice of intention to compete for Matriculation Scholarships to be given in writing to the Registrar.
July 2-Matriculation examinations begin at the University and every Collegiate Institute and High ,School in Ontario.
Sept. 1-Applications accompanied by fee for Supplemental Pass or Matriculation examinations to be made to the Registrar.
" 17-Arts and Science Supplemental Pass examinations begin.
". 19-Supplemental Matriculation examinations begin.
" 19-Medical Supplemental examinations begin.
" 30-Classes in Medicine open.
Oct. 2-Classes in Arts, Applied Science and Mining open.
" 16-University Day. Holiday for Athletic Games.
" 18-Candidates for B.D., Supplemental and Matriculation examinations in Theology must give notice of their intention to appear.
" 28-B.D. Supplemental and Matriculation examinations in Theology begin.
Nov. 1-Classes in Theology open.
Dec. 23-Christmas Holidays begin.
1908.

Jan. 5-Classes re-open.
Mar. 1-Time expires for receiving Theses for Ph.D., D.Sc. and Essays for University Prizes.
" 4-Holiday.
April 1-Class work in Arts, Medicine and Mining closes.
" 6-Examinations in Arts, Medicine and Mining begin.
" 10 -Class work in Theology closes.
" 13-Examinations in Theology begin.
" 28-Statutory Meeting of Senate for conferring Degrees, \&c. ${ }^{\circ}$
" 29-Convocation for distributing Prizes, announcing Honours and laureating graduates in Arts, Medicine, Science and Theology.

## UNIVERSITY OFFICERS.

## BOARD OF TRUSTEES.





|  | Rev. W. T. Herridge, D.D.......................... Ottawa |
| :---: | :---: |
|  | Rev. D. R. Drummond, M.A............ . . . . . . . . Hamilton |
| Retire | Rev. J. Edgar Hill, D.D........................ . Montreal |
| April | Sheriff Maclennan, B.A......................... . Lindsay |
| 1907 | Sir Sandford Fleming, K.C.M.G., LL.D.......... . Ottawa |
|  | D. B. Maclennan, M.A., K.C.. ................. . Cornwall |
|  | P. C. McGregor, B.A., LL. D. . . . . . . . . . . . . . . . . . Almonte |

Hon. Mr. Justice Maclennan, LL.D. ..... Chairman.
Geo. Y. Chown, B.A. Secretary-Treasurer.

The Annual Meeting of the Board will be held in the Senate Chamber on the evening of Wednesday, April 29th.

## UNIVERSITY COUNCIL.

The Council consists of the Chancellor, the Trustees, the members of the Senate; and an equal number of elective members.

The Chancellor is elected by the Council, except when two or more candidates are nominated, in which case the election is by registered graduates and alumni. He holds office for three years, and, as highest officer of the University, presides at meetings of the Council and Convocation, and at statutory meetings of Senate. In his absence he is represented by the Vice-Chancellor.

Of the elective members eight retire annually, except in every sixth year when ten retire. Successors are elected by registered graduates and alumni. Retiring members may be reelected.

The Council has power to elect five trustees (one trustee retiring annually) ; to discuss all questions relating to the College and its welfare; to make representations of its views to the Senate or Board of Trustees; to decide on proposals for affiliation and to arrange all matters pertaining to the installation of the Chancellor, to its own meetings and business, the meetings and proceedings of convocation, and the fees for membership, registration and voting.

Convocation for the conferring of degrees, etc., will be held upon Wednesday, April 29th, 1908.

ELECTIVE MEMBERS IN THE ORDER OF THEIR RETIRING.

| Retire 1912 | P. C. McGregor, B.A., LL.D..... . . . . . . . . . . . . Almonte |
| :---: | :---: |
|  | Rev. Eber Crummy, D.D......... . . . . . . . . . . . . Toronto |
|  | R. S. Minnes, M.A., M.D. . . . . . . . . . . . . . . . . . . . . . . Ottawa |
|  | J. McD. Mowat, B.A. . . . . . . . . . . . . . . . . . . . . . . . Kingston |
|  | Rev. J. Hay, M.A., B.D...... . . . . . . . . . . . . . . . . . Renfrew |
|  | James A. Minnes, B.A. . . . . . . . . . . . . . . . . . . . . . . Kingston |
|  | Rev. T. C. Brown, M.A... . . . . . . . . . . . . . . . . . . . . Toronto |
|  | Miss A. E. Marty, M.A............ . . . . . . . . . . . Ottawa |
| Retire 1911 | D. M. Mcintyre, Esq., B.A................ . . . . . . Kingston |
|  | Rev. J. D. Boyd, B.A...... . . . . . . . . . . . . . . . . . . Kingston |
|  | Rev. James H. Turnbull, M.A.. . . . . . . . . . . . . . . . Ottawa |
|  | G. F. Henderson, B.A. . . . . . . . . . . . . . . . . . . . . . . . Ottawa |
|  | Rev. J. Cumberland, M.A.. . . . . . . . . . . . . . . . . . . . Stella |
|  | A. H. Beaton, B.A................. . . . . . . . . . . . . Toronto |
|  | Rev. James Anthony, M.A.......... . . . . . . Waterdown |
|  | Miss E. Fitzgerald, M.A........... . . Niagara Falls, Ont. |



## CHANCELLOR:

## Sir Sandford Fleming, C.E., K.C.M.G., LL.D.

## PRINCIPAL ÁND VICE-CHANCELLOR:

Very Rev. Daniel Miner Gordon, M.A., D.D.

## VICE-PRINCIPAL:

John Watson, M.A., LL.D.
REGISTRAR :
George Y. Chown, B.A.

## OFFICERS OF INSTRUCTION:

## I.-In Theology.

Very Rev.D.M. Gordon,M.A.,D.D.Primarius Professor of Divinity Rev. D. Ross, D.D................ Professor of Apologetics and New Testament Criticism and Dean of Theological Faculty.
Rev. W. G. Jordan, B.A., DD. . . . . Professor of Hebrew and Old Testament Criticism.
Rev. John Macnaughton, M.A.....Professor of Church History and History of Dogma.
Rev. G. M. Milligan, D.D., LL.D... Lecturer on Pastoral Theology. Rev. J. S. Carruthers. "Watkins" Lecturer on Elocution
II.-In Arts.

Nathan F. Dupuis, M.A., F. B. S.,
Edin.
Professor of Mathematics.
Rev. George D. Ferguson, B.A.... . Professor of History.
John Watson, M.A., LL.D. . . . . . . . Professor of Moral Philosophy. D. H. Marshall, M.A., F.R.S.E.... . Emeritus Professor of Physics. James Cappon, M.A............... Professor of English Language and Literature, and Dean of Arts Faculty.
J. Macgillivray, Ph.D. (Leipsic)... Professor of German.
S. W. Dyde, M.A., D.Sc., LL.D. . . . Professor of Mental Philosophy Rev. Jas. Fowler, M.A., F.R.C.S... ."The John Roberts Allan" Professor of Botany.
Adam Shortt, MA................."The Sir John A. Macdonald" Professor of Political and Economic Science.
A. P. Knight, M.A., M.D........ "The John Roberts" Professor
of Animal Biology and Phy-
siology.
III.-In Practical Science.
Nathan F. Dupuis, M.A., F.B.S.,
F.R.C.S Professor of Mathematics and
Mechanism and Dean of
Faculty.
Wm. L. Goodwin, B.Sc., (Lond.)D.Sc. (Edin.), F.R.S.C.........Professor of Chemistry, Direc-tor of School of Mining.
D. H. Marshall, M.A., F.R.S.E.....Emeritus Professor of Physics.William Nicol, M.A................Professor of Mineralogy andAssaying.
Rev. Jas. Fowler, M.A., F.R.S.C... . Professor of Botany
A. P. Knight, M.A., M.D........ Professor of Animal Biology and Physiology.
L. W. Gill, B.Sc. Professor of Electrical Engi- neering.Stafford Kirkpatrick, M.Sc....... Professor of Metallurgy.
Reginald Brock, M.A Professor of Geology and Petrography.
J. C. Gwillim, B.Sc. Professor of Mining Engineer- ing.
N. R. Carmichael, M.A Associate Professor of Physics.
A. K. Kirkpatrick Professor of Civil Engineering.
A. Macphail, B.Sc. Professor of General Engi- neering.
A. L. Clark, M.A., Ph.D. Professor of Physics.
F. O. Willhofft, M.A. Professor in Mechanical En- gineering.
John Waddell, B.A., D.Sc., Ph.D . . Lecturer on Chemistry.
W. C. Baker, M.A................. Lecturer in Experimental Physics on "The Robert Waddell" Foundation.
M. B. Baker, B.Sc Lecturer on Mineralogy andGeology.
L. A. H. Warren, M.A. Lecturer on Applied Mathe- matics
C. W. Dickson, M.A., Ph.D., Lecturer on Chemistry.
IV.-In Medicine.
D. M. Gordon, M.A., D.D. Principal.
J. C. Connell, M.A., M.D. Dean.
W. T. Connell, M.D., M.R.C.S.,(Eng.), L.R.C.P. (Lon.).Secretary.
Surgery.
Hon. Michael Sullivan, M.D.......Emeritus Professor. D. E. Mundell, B.A., M.D......... . Professor of the principles and Practice of Surgery.
W. G. Anglin, M.D., M.R.C.S., (Eng.),Professor of Clinical Surgery.
Edward Ryan, B.A., M.D Associate Professor of Clinical Surgery.
G. W. Mylks, M.D Clinical Assistant.C. A. Morrison, M.D.............. Clinical Assistant.Medicine.
James Third, M.D. (Toronto), M.D., C.M. (Trinity) . . . . . . . . . Professor of Medicine and Clinical Medicine.
J. W. Campbell, B.A., M.D., C.M... Associate Professor of Medi- cine and Clinical Medicine.
Edward Ryan, B.A., M.D. Associate Professor of ClinicalMedicine.
A. E. Ross, B.A., M.D. Professor of Materia Medica, Pharmacology and Pharmacy.
W. C. Barber, M.D. (Tor.), M.D.,
C.M. (Vic.), Clinical Assistant.
W. C. Herriman, M.D. (Tor.) . . . Clinical Assistant.
Obstetrics and Gynaecology.
R. W. Garrett, M.A., M.D. Professor.
Isaac Wood, M.A., M.D., M.R.C.
S. (Eng.), F.O.S. (Edin........Associate Professor.
Pediatrics.
Isaac Wood, M.A., M.D., M.R.C.S.(Eng.), F.O.S. (Edin.)
Professor.
Ophthalmology, Otology, Laryngology, Rhinology.
J. C. Connell, M.A., M.D......... Professor.
Medical Jurisprudence and Toxicology.
A. R. B. Williamson, M.A., M.D.,(Lond.). Professor.
John McIntyre, M.A., K.C........Lecturer.
Sanitary Science.
W. T. Connell, M.D., M.R.C.S.(Eng.), L.R.C.P. (Lond.) ..... Professor.
Pathology and Bacteriology.
W. T. Connell, M.D., M.R.C.S. (Eng.), L.R.C.P. (Lond.).....Professor.
A. R. B. Williamson, M.A., M.D.,M.R.C.S. (Eng.), L.R.C.P.
(Lond.) Demonstrator.
Mental Diseases.
W. C. Barber, M.D. (Tor.), M.D.,
C.M. (Viv.) Asst. Supt. Rockwood Hospital for Insane, Professor.
Anatomy.
Edward Ryan, B.A., M.D. Professor of Applied Anatomy.G. W. Mylks, M.D.Professor.
F. Etherington, M.D., L.R.C.P. and S . (Edin.) Lecturer and Chief Demon- strator in Anatomy.
A. W. Richardson
C. A. Morrison, M.D Demonstrators.
W. Gibson, M.D., C.M. ..... )Biology, Physiology and Histology.
A. P. Knight, M.A., M.D. Professor.
F. Etherington, M.D., L.R.C.P. and S . (Edin.) Lecturer in Animal Morpho- logy.
I. G. Bogart, M.D. Demonstrator.
Chemistry and Applied Chemistry.
W. L. Goodwin, D.Sc. (Edin.)..Professor.
John Waddell, Ph.D. (Leip.)
D.Sc. (Edin.)Isaac Wood, M.A., M.D., M.R.C.S. (Eng.), F.O.S. (Edin.).....Lecturer.
Physics.
G. L. Clark, M.A. Ph.D ..... Professor.
N. R. Carmichael, M.A. Associate Professor.
W. C. Baker, M.A., Lecturer.
Librarian.
Prof. W. T. Connell.

> Secretary of the Faculty.
Professor W. T. Connell.
V.-Examiners in Law.
J. L. Whiting, M.A., K.C........ Criminal Law.
R. Vashor Rogers, B.A.,K.C.,LL.D.Common Law.
G. M. Macdonnell, B.A., K.C. ......The Law of Real Property. John McIntyre, M.A., K.C.........Medical Jurisprudence.

## OTHER OFFICERS.

> Registrar of University Council.
> Francis King, M.A.
> Observatory Board. The Principal.
> Curators of Library.

Professors Ross, Knight, Shortt and Macgillivray.
Librarian.
Miss Lois Saunders.
Curators of Museum.
Professors of Biology and Geology.
Examiner in Medical Matriculation.
Arthur E. Ross, B.A., M.D.
Examiners in Gaelic.
Rev. M. Macgillivray, M.A., and John Matheson, M.A.
Janitor.
John V. Burton.

## - 15 -

| HOUR | monday | tuesday | WEDNESDAY | thursday | Friday | SATURDAY |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 8 | Jr. English. A.B. *German. Sr. Hebrew. <br> *Mineralogy. | Jr. English. B. *German. <br> Jr. Hebrew. <br> *Mineralogy. | Jr. English. A. *German. Sr. Hebrew. <br> *Mineralogy. | Jr. English. B. *German. <br> Jr. Hebrew. <br> Sr. Chemistry. III <br> *Mineralogy. | Jr. Fnglish. A. *German. <br> Jr. Hebrew. <br> *Mineralogy. | * $\ddagger$ Assaying. |
| 9 | Jr. Greek. Con. History. Ment'l Philosophy Animal Biology. El. Mineralogy. <br> *Philosophy. <br> *Pol. Science. | Jr. Greek. Med. History. Moral Philosophy. Sr. Physics. <br> *Philosophy. <br> *Pol. Science. | Jr. Greek Con. History. Ment'l Philosophy An. Biology. <br> *Philosophy. <br> *Pol. Science. <br> *Mineralogy. | Jr. Greek. Med. History. Moral Philosophy Sr. Physics. <br> *Philosophy. <br> *Pol. Science. | Jr. Greek. Med. History. Ment'l Philosophy Animal Biology. <br> *Philosophy. <br> *Pol. Science. <br> *Mathematics. | * $\ddagger$ Assayin¢. |
| 10 | Sr. French. <br> Economics. <br> Jr. Physics. <br> *Latin. <br> * History. <br> *Physics. <br> *Philosophy. <br> *Botany. <br> *Geology. | Sr. French. <br> Sr. English. A. <br> Sr. Politics. <br> Sr. Mathematiss. <br> Botany. <br> *Latin. <br> *German. <br> *History. <br> *Geology. | Sr. English. P. Economics. <br> Botany. <br> *Latin. <br> *History. <br> *Philosophy. <br> *Mathematics. <br> *Botany. <br> *Geology. | Sr. French. <br> Sr. Politics. <br> Sr. Mathematics. <br> Botany. <br> *Latin. <br> *German. <br> *History. <br> Biol, Laboratory. <br> *Mineralogy. <br> *Geology. | Sr. French. <br> Economics. Italian. <br> *Latin. <br> *French. <br> *History. <br> Biol. Laboratory. <br> *Mathematics. <br> *Botany. <br> *Geology. | * Assaying. |
| 11 | Sr. Latin. Jr. German. Jr. Chemistry. <br> *English. <br> *Greek. <br> *Mathematics. <br> *Botany. <br> *Geology. | Sr. Latin. Jr. German. Jr. Chemistry. <br> *Anglo-Saxon. <br> *Greek. <br> *Mathematics. <br> *Botany. <br> *Geology. | Sr. Latin. Jr. German. Jr. Chemistry (Practical). <br> *English. <br> *Greek. <br> *Mineralogy. <br> *Botany. <br> *Geology. | Jr. Latin. <br> Sr. Latin. <br> Jr. German. <br> Sr. Chemistry. I. <br> *French. <br> *Greek. <br> *Mathematics. <br> *Botany. <br> *Geology. | Sr Latin. <br> Jr. German. <br> Sr. Chemistry, II. <br> *English. <br> *Greek. <br> *Botany. <br> *Geology. | * $\ddagger$ Assaying. |


| 12 | Jr. Latin. <br> Sr. Greek. <br> Sr. German. <br> *French. <br> *Philosophy. <br> *An. Biology. | Jr. Latin. <br> Sr. Greek. <br> Sr. German. <br> Jr. English. A. <br> *French. <br> *Sanscrit. <br> *Philosophy. <br> *An. Biology. | Jr. Latin. <br> Sr. Greek. <br> Sr. German. <br> *French. <br> *Sanscrit. <br> *Philosophy. <br> *An. Biology. | Sr. Greek. <br> Sr. German. <br> Jr. English. B. <br> *French. <br> *Philosophy. <br> *An. Biology. | Jr. Latin. <br> Sr. Greek. <br> Sr. German. <br> *Latin. <br> *French. <br> *Philosophy. <br> *Philology. <br> *An. Biology. <br> Astronomy. | *+Assaying. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2 | Jr. French. <br> Sr. English. A. <br> *Mineralogy. | Jr. French. <br> Sr. English. B. Geology. <br> *Physics. <br> *Chemistry. | Jr. French. Sr. French. Sr. English. A. *Physics. | Jr. French. Sr. English. A \& B Geology. <br> *Physics. | Jr. French. <br> Sr. English. B. *English. Blowpipe Analysis. | * $\ddagger$ Assaying. |
| 3 | Jr. Mathemat. <br> Jr. Chemistry. A. (Practical). <br> *Chemistry. | Jr. Physics. <br> *Physics. <br> *Chemistry. | Jr. Mathemat. <br> *Chemistry. | Jr. Physics. <br> *Mathematics. <br> *Physics. <br> *Chemistry. | Sr. Hebrew. Jr. Mathemat. <br> *Chemistry. | *†Assaying. |
| 4 | * Mathematics. | *Mathematics. | *Mathematics. |  |  | ${ }_{\ddagger}^{+}$Assaying. |

TIME TABLE-THEOLOGY.


## JUNIOR AND SENIOR MATRICULATION EXAMINATIONS.

September, 1907.

| Thursday, | 9 A.m. |  |  | $2 \text { Р.M. }$ <br> Eng. Literature. |
| :---: | :---: | :---: | :---: | :---: |
|  | 19th | Sept.-English Composition. |  |  |
| Friday, | 20th |  | -History. | Eng. Literature. Geometry. |
| Saturday, | 21st | ، | - Latin Authors. | Latin Grammar \& Composition. |
| Monday, | 23 rd |  | -Physics. |  |
| Tuesday, | $24^{\text {th }}$ | " | -Arithmetic. | Algebra. |
| Wednesday, | $25^{\text {th }}$ | ' | -French Authors. | French Grammar \& Composition. |
| Thursday, | 26th | ، | -Greek Authors. | Greek Grammar \& Composition. |
|  |  |  | -German Authors. | German Grammar \& Composition. |
| Friday, | 27 th |  | -Botany. | Animal Biology. |
| Saturday, | 28th | ، | -Chemistry. | English Grammar |

## PASS SUPPLEMENTAL EXAMINATIONS.

September, 1907.

$$
9 \text { А. М. }
$$

Tuesday, 17th Sept.-Jr. Latin. Wednesday, Thursday, Friday,

Saturday, 2 ist Monday, 23 rd Tuesday, 24th
Wednesday,
Thursday, 26th
Friday, Saturday,
Tuesday,

18th " -Economics.
19th " -Jr. English.
2oth " -Medieval History.

24th " -Jr. Mathematics.
25th " -Mineralogy.
26th " -Jr. Greek.
*Jr. German.
27th " - Botany.
28th " -Jr. Chemistry.
29th Oct.-Jr. Hebrew.

2 P.M.
Sr. Latin.
Politics.
Sr. English.
English Constitutional History.
Moral Philosophy.
Sr. Physics.
Sr. Mathematics.
Geology.
${ }^{* *}$ Sr. French.
Sr. Greek
**Sr. German.
Animal Biology.
Sr. Chemistry.
Sr. Hebrew.

## PASS EXAMINATIONS.

April, 1908.

## ARTS.

$$
9 \text { A.M. } \quad 2 \text { P.M. }
$$

| Monday, | 6th April-*Jr. French. | ${ }^{* *}$ Sr. French. |  |
| :--- | ---: | :--- | :--- |
| Tuesday, | 7th | " | -Jr. Chemistry. | Sr. Chemistry.

## THEOLOGY.

9 A.M.
Monday, I3th April-Church History.
Tuesday, 14th " -O. T. Criticism.
Wednesday, I5th " -Sr. O. T. Criticism.
Thursday, 16th " -New Testament Criticism.
Friday, I7th " -Divinity.
Saturday, 18th " -Apologetics.

Three hours allowed for each paper.
Time Table for Honour Examinations will be issued in March.
*8.30 Dictation. **1.30 Dictation.

## GENERAL ANNOUNCEMENT.

Queen's College has, under its Royal Charter, "the style and privileges of a University."

The Sixty-seventh Session will open on Wednesday, the 2nd of October, 1907.

Boarding.-Lists of boarding houses may be obtained from the Registrar. A residence for a limited number of women students has been recently established. Persons desiring information should write to "The Secretary of Woman's Residence, Queen's University, Kingston."

Hospital Privileges.-The Governors of the Kingston General Hospital agree to give to those students who take out Hospital tickets (cost \$I) all the advantages of a private room, including room, board, attendance of nurses in training, and ordinary medicines, when requiring medical or surgical treatment, from October ist to May Ist. These benefits are conditional on 250 students taking out tickets by November ist.

Registration.-All students are required to have their names entered in the University Register. Before registration they must pay the required fees.

Attendance at Church.-All students are expected to attend the churches to which they profess to belong, and produce certificates of attendance from their clergymen when required.

The Library contains about 46,000 volumes. Students are entitled to the use of it subject to by-laws.

Intra-mural students wishing to obtain books from the Library are required to make a deposit of $\$ 1.00$ for one book, $\$ 2.00$ for two books, or $\$ 3.00$ for three books. No fee is required, and deposit is refunded when desired.

Cupboards containing small departmental libraries in the various subjects are provided in the Consulting Rooms, for which students may obtain keys from the Librarian on depositing \$roo. A special section is devoted to Mental and Moral Philosophy, and all students taking these subjects are expected to provide themselves with keys for the cupboards.

Extra-mural students may obtain books from the Library on payment of a deposit of $\$ 2.00$ for one book, $\$ 4.00$ for two, and $\$ 5.00$ for three. Deposit may be withdrawn at any time. There is no fee, but the postage is paid by the borrower, being deducted from deposit before returning. For further particulars and regulations apply to the Librarian. Special arrangements are made for supplying the necessary books to extra-mural students in the Ph.D., B. Paed. and D. Paed. courses.

All communications concerning books, and all deposits must be made directly to the Librarian.
J. McDonald Mowat, Esq., B.A., Kingston, Ont., has agreed to give the sum of $\$ 25.00$ annually to the Political Science department to be expended in the purchase of books. For the present this sum will go towards obtaining the British Blue Books. In this and all donations of a similar nature, the books will be marked with the donor's name, and the department for which they are given.

The Museum.-The Geological collections, embracing rocks, minerals and fossils, contain the following:
I. The Bell collections, illustrating a north and south stratagraphical section across the Province from Lake Erie, I,000 specimens. Section across the Ottawa River, 500.
2. Specimens of rocks and minerals from various sources, 3,600.
3. Specimens of fossils, 5,000 . The rocks and minerals contributed and collected during late years are deposited in the collections of the School of Mining.
4. The Botanical collection contains $\mathrm{I}, 200$ genera, 3,650 species, and 9,450 sheets of mounted plants. The private herbarium in the museum contains 2,157 genera, 8,654 species, and 14,73I sheets. These include large collections of Tasmanian, Australian, South African, European and Asiatic species. The flora of the British Islands is almost completely represented. A large addition has been recently made to the herbarium.
5. The zoological collection contains: Mammals, 26; birds, 130 ; fish, 40 ; invertebrates, about 200 in alcohol and 150 dry; a small collection of reptiles, and another of insects; the mollusca are represented by about 2,600 shells.

Academic Costume.-All graduates and undergraduates when attending class or any college meeting, shall wear the costume prescribed by the University.

Each degree has its distinctive hood, as follows: B.A, black, bordered with red silk; M.A., scarlet; B.Sc., black silk, bordered with yellow silk; D.Sc., black silk, lined with blue silk, bordered with white; M.D., scarlet, bordered with white; B.D., white, bordered with crimson plush; D.D., black silk, lined with white silk; LL B., blue, bordered with white fur; LL.D., black silk, lined with blue silk; Ph.D., black silk, lined with purple, bordered with white.

Applications for degrees will only be considered when returns for April and September examinations are submitted and at the meeting of Senate immediately preceding Christmas vacation.

Fees.-Graduation and spring examination fees must be paid before March 23rd, supplemental examination fees before
September Ist; all other fees on or before October 12th. Students failing to register within ten days of the opening of the session shall pay an extra registration fee of $\$ 3.00$.
Fees: (i) Faculty of Arts.
Senior Matriculation Examination ............................. $\$$. 10 oo
Senior Matriculation on pro tanto certificate ................ io 00
Junior Matriculation Examination.. ......................... 500

Registration ........ ......... ................... " " 1000
Class Fees.... ................................. ". " 2500
$\dagger$ Any class except those mentioned below...... ". " 800
†Junior Chemistry.... .......................... ". 1200
$\dagger$ Senior Chemistry ...... ............ .......... ". " 1200
*Pass Examination ....... ............. ........ ". " 1000
*Honour Examination ......................... " 1200

Change of classes after registration ............................ 200
Spectal Fees.
Laboratory-Honour Qualitative Analysis.... per session \$15 00 Honour Quantitative Analysis... " 1500 Physics, Pass or Prelim. Honour " 200
Laboratory -Physics, Final or Exper. Honour ". Io 00 Botany, Pass Course ............. ". I 00 $\dagger$ Botany, Honour Course ...... " 300 Animal Biology, Pass Course.... "" 500 Animal Biology, Prelim'y Hon's. " 1500 Animal Biology, Final Honours.. " Io 00
Junior Philosophy (correcting essays).... ................. I 00
Matriculation Certificate ....... ................................... 500
Certificate of standing ............................................ 1 . 00
Graduation -Bachelor of Arts (B.A.) .... ................. . 1000
Master of Arts (M.A.).... ................... 2000
Bachelor of Pedagogy (B. Pæd.) ............. 1000
Doctor of Philosophy (Ph.D.) ................ 5000
Doctor of Science (D.Sc.).... ................ . 5000
Doctor of Pedagogy (D. Pæd.) ............... . 5000
Admission ad eundum gradum (B.A.).... .................. 2000
statum. . . . . . . . . . . . . . . . . . . . . . . . . . 10 oo

Students taking Physics, Chemistry, Geology or Mineralogy must register in the School of Mining, pay the fee of $\$ 1.00$ and make a deposit of $\$ 5.00$.
$\dagger$ Students collecting 200 specimens for their own use will be exempt from this fee.
*Students who have paid the examination fee in April can write on the September examinations on payment of $\$ 5.00$.

[^0]Fees: (2) Faculty of Practical Science.
Matriculation Examination (September) ..... $\$ 500$
Registration per session ..... 1000
Athletics ..... 300
$\dagger$ Class Fees ..... 6000
*Pass Examination ..... 10. 00
For Students not Paying Class Fees as Above.
Any Class ..... per session \$12 00
Laboratory-Qualitative Analysis ..... 1500
Quantitative Analysis ..... 1500
Mechanical and Engineering ..... 2000
Honour Practical Physics ..... IO 00
Pass Practical Physics ..... 200
Petrography ..... 500
Assaying ..... 500
Certificate of standing ..... I 00
Graduation.-B.Sc ..... 2000
M.E ..... 2000
Admission ad eundum statum ..... IO 00*Students who have paid the examination fee in April canwrite on the September examination on payment of $\$ 5.00$.
$\dagger$ Any student registered in 1905 or previously will only require to pay $\$ 50$ class fees per session.
Fees: (3) Faculty-of Mediciné.
Matriculation Examination ..... $\$ 500$The Sessional Fee, including Classes, Registration, Athletics,
Library, Examination, Laboratories, and the required amount ofdissection material is \$IOO per session. If paid before October6th, \$95. If not paid before January roth, \$105. Special ar-rangements will be made with those who do not take the fullcourse of any year.
Special Fees.
Graduation-M.D., C.M. ..... $\$ 30$ oo
Fifth year ..... 5000
Supplemental Examinations ..... IO 00
Hospital Ticket-Full Course ..... 2000
Hospital Ticket-Single Session ..... 700
Ad eundum statum ..... 1000
Exclusive use of Microscope per Session ..... 500For further information apply to Dr. W. T. Connell, Secre-tary, Medical Faculty.
Fees: (4) Faculty of Theology.
Registration per session \$ ..... 500Matriculation200
Athletics ..... 300
Pass Examination ..... 300
Supplemental Pass Examination ..... 300
*B.D. Examination ..... 600
Special Fees.
Testamur ..... \$ 200
Graduation.-Bachelor of Divinity ..... 2000
Admission ad eundum statum ..... 10 00
Fees: (5) Faculty of Law.
Registration per session \$10 00 Examination ..... IO 00
Special Fees.
Graduation.-Bachelor of Laws (LL.B.) ..... $\$ 2000$
Admission ad eundum gradum ..... 2000
Admission ad eundum statum ..... 10 00
(6) Agriculture.
For information apply to J. W. Mitchell, B.A., Superintendent of Dairy School.
*Students who have paid the examination fee in April can write on the September examinations on payment of $\$ 3.00$.

## FACULTY OF ARTS.

## ARTICLE I.-PASS MATRICULATION.

GENERAL REGULATIONS.

1. The Classes in the University are open to unmatriculated students but candidates for a degree must pass the matriculation examination or an examination accepted by the Senate as equivalent before being admitted to examination on the University courses.
2. Any person presenting a Departmental certificate of matriculation will be admitted as an undergraduate upon paying the registration fee. Any person will be exempt from any part of the Matriculation Examination already passed.
3. Any person who is permitted to attend on presentation of an Ontario Junior Leaving certificate or equivalent certificate from any of the other Provinces which does not include Latin, must take Latin for one session and matriculate in this subject before entering the Junior class, and if he has not passed the Matriculation examination in Greek, French or German he must in his first or second year come up for examination in either the Matriculation or the Junior class work in one of these three subjects.
4. The examination in July will be that conducted for the Universities by the Education Department, known as the Departmental Junior Matriculation Examination. The examination will be held at Queen's University and at the various Collegiate Institutes and High Schools in Ontario. Candidates for this examination, if they propose to write at a Collegiate Institute or High School, must notify the Public School Inspector of their
city or county, and pay him the fee before May 23rd, and at the same time send notice to the University Registrar on a form which will be supplied on application. Candidates proposing to write at Queen's University must send the required notice to the Registrar by May 23rd, accompanied by the fee.
5. A second examination will begin at Queen's University on September 19th, $190 \%$. Notice of intention to appear at this examination, together with the fee, must be sent to the Registrar by September 1st, on a form which will be supplied on application. A candidate failing partially in July and desiring to complete the examination in September, and who did not write at Queen's University, must send a copy of the marks obtained in the July examination, certified by the headmaster of the school at which he wrote.
6. The fees for Matriculation are:-Junior Matriculation, $\$ 5.00$; Supplemental examination, in Junior Matriculation subjects in which the candidate has failed, $\$ 2.00$ for each subject; total fee not to exceed $\$ 5.00$. Senior Matriculation, $\$ 10.00$.
7. All Candidates for Junior Matriculation shall take English Composition, English Literature, English Grammar, Algebra, Geometry, Arithmetic, History, (British, Canadian and Ancient), Latin, and any two of Greek, French, German, Experimental Science, (Physics and Chemistry.)
8. The percentage for Pass is thirty-three and onethird on each paper. The marks for sight work on each of the "Authors" papers shall not constitute more than thirty-three and one-third per cent. of the whole of the marks for the paper.
9. Candidates who matriculate in any University in the British Empire will be allowed to enter upon a course without further examination. Matriculation Examination from Unịversities in other countries will be accepted pro tanto.
10. Teachers' examinations are accepted pro tanto in lieu of the Matriculation Examination, i.e., in so far as the subjects correspond as follows:-

| ta | Jr. Leaving. |
| :---: | :---: |
| Prince Edward I | Second Class. |
| Nova Scotia. | Grade XI. |
| New Brunswick | Second Class |
| Quebec. | Academy Grade III. |
| Manitoba | University School AA Second Class. |
| Alberta. | Grade VII. |
| Saskatchew | Grade VII. |
| British | ntermed |

11. In the case of students over the age of 21 the Senate may postpone the Matriculation examination.
12. Junior Leaving certificates will be accepted pro rata at the Junior Matriculation examination.
13. Matriculation scholarships will be awarded on the results of the July Departmental Matriculation examination. See article on Matriculation Scholarships.
14. Candidates for scholarships must notify the Registrar not later than May 23rd, stating distinctly where they intend to write, and declaring their intention to enter, if successful, on a course of study in Queen's University.

SPECIAL Rates Fúr Students attending queen's UNIVERSITY OR THE SCHOOL OF MINING.
Territory:-Between any station on the Canadian Pacific Railway, the Grand Trunk Railway and the Intercolonial Railway in Canada and Kingston, either
direct or over any one of the other lines, where the one way regular first-class rate is $\$ 20$ or more.

Condition:-If any student is coming to attend Queen's College or the School of Mining for the first time a certificate to that effect will be accepted from parent, guardian, clergyman or magistrate. Subsequently, going or returning from Kingston, certificates must be signed by the Registrar of the University.

Rate:-One way continuous passage tickets will be issued at half the regular, first-class, one way rate, minmum rate to be charged $\$ 20$. For example, if the firstclass, one way rate is $\$ 50, \$ 25$ will be charged, but if the one reay rate is less than $\$ 40$, $\$ 20$ will be collected. <br> \title{
SUBJECTS OF JUNIOR MATRICULATION. <br> \title{
SUBJECTS OF JUNIOR MATRICULATION. <br> <br> Greek.
} <br> <br> Greek.
}

Translation into English of passages from prescribed texts.
Translation at sight (with the aid of vocabularies) of easy Attic prose, to which special importance will be attached.

Grammatical questions on the passages from prescribed texts will be set, and such other questions as arise naturally from the context.

Translation from English into Gree $k$ of sentences and of easy narrative passages based upon the prescribed prose texts.

The following are the prescribed texts:-
1908: Xenophon selections in White's First Greek Book, with the exercises thereon ; Herodotus, Tales ed. Farnell, XI-XX, inclusive.

Two papers will be set: (I) Prescribed texts and translation at sight; questions on grammar; (2) the translation of English into Greek.

## Latin.

Translation at sight of passages of average difficulty from Cæsar, upon which special stress will be laid.

Translation from a prescribed portion of Virgil's Aeneid, with questions thereon.

Questions on Latin accidence.
Translation into Latin of English sentences to illustrate the common rules of Latin syntax, upon which special stress will be laid. The vocabulary will be taken from the prescribed portion of Cæsar.

Examination upon a short prescribed portion of Cæsar, to test the candidate's knowledge of Latin syntax and his power of idiomatic translation, etc.

The following are the texts prescribed:-
Cæsar, Bellum Gallicum, Book IV., chaps. 20-38, and Book V., chaps. I-23; Virgil, Aeneid, Book II., vv. I-505.

Two papers will be set: (I) Translation at sight, Virgil, and accidence. (2) Translation into Latin, syntax, and idiomatic translation from prescribed Cæsar, etc.

## English.

Grammar and Rhetoric: The main facts in the development of the language. Etymology and syntax, including the logical
structure of the sentence and the inflection, classification and elementary analysis of words. The rhetorical structure of the sentence and paragraph.

## One examination paper.

Composition.-An essay on one of several themes set by the examiners. In order to pass in this subject, legible writing, correct spelling and punctuation, and proper construction of sentences are indispensable. The candidate should also give attention to the structure of the whole essay, the effective ordering of the thought, and the accurate employment of a good English vocabulary. About two pages of foolscap is suggested as the proper length for the essay; but quality, not quantity, will be mainly regarded.

One examination paper.
Literature.-Such questions only shall be set as may serve to test the candidate's familiarity with, and intelligent and appreciative comprehension of, the prescribed texts. The candidate will be expected to have memorized some of the finest passages. In addition to questions on the prescribed selections, others shall be set on a "sight passage" to test the candidate's ability to interpret literature for himself.

One examination paper.
1908: Longfellow, Evangeline, The Day is Done, The Old Clock on the Stairs, The Fire of Driftwood, Resignation, The Warden of the Cinque Ports, The Bridge, a Gleam of Sunshine.

Wordsworth's, "Three years she grew in sun and shade," "She was a Phantom of Delight," "There is a Flower, the lesser Celandine," To a Skylark, (Ethereal minstrel! pilgrim of the sky!), The Green Linnet, To the Cuckoo, "With little here to do or see."

Shakespeare, Macbeth.
1909: Coleridge, The Ancient Mariner; Wordsworth, Michael, Influence of Natural Objects, Nutting, Expostulations and Reply, The Tables Turned, The Solitary Reaper, Ode to Duty, Elegiac Stanzas, To the Rev. Dr. Wordsworth, "She was a phantom of delight," To the Cuckoo, The Green Linnet, "Bright flower! whose home," To a Skylark, ("Ethereal minstrel! pilgrim of the sky!"), Reverie of Poor Susan, To my Sister, "Three years she grew in sun and shade," September 1819, Upon the same Occasion. The following twelve sonnets: "A flock of sheep that leisurely," Earth hath not anything," "It is not to be thought of," "Fair star of evening," "O friend! I know not," "Milton! thou shouldst," "When I have borne in memory," "Brook! whose society," "Tax not the royal saint," "They dreamt not of a perishable home;" Shakespeare, Merchant of Venice.

## German.

The candidate's knowledge of German will be tested by: (I) simple questions on Grammar; (2) the translation of simple passages from English into German; (3) translation at sight of easy passages from modern German, and (4) an examination on the following texts:-

Grimm, Rotkäppchen; Andersoin, Wie's der Alte macht, Das neue Kleid, Venedig, Rothschild, Der Bär; Ertl, Himmelsschlüssel; Frommel, Das eiserne Kreuz; Baumbach, Nicotiana, Der Goldbaum; Heine, Lorelei, Du bist wie eine Blume; Uhland, Schäfer's Sonntagslied, Das Schloss am Meer; Chamisso, Das Schloss Boncourt; Claudius, Die Sterne, Der Riese Goliath; Goethe, Mignon; Erlkönig, Der Sänger; Schiller, Der Jüngling am Bache.

1908: Leander, Täumerein, pp. 45-90, (selected by Van Daell).

1909: Baumbach, Waldnovellerr.
Two papers will be set: (I) Prescribed texts and translations at sight; questions on Grammar; (2) the translation of English into German.

## French.

The candidate's knowledge of French will be tested by: (I) simple questions on Grammar; (2) the translation of simple passages from English into French; (3) translation at sight of easy passages from modern French, and (4) an examination on the following texts:-

Lamennais, Paroles d'un croyant, Chaps. VII and XVII; Perrault, Le Maître Chat, ou le Chat Botté; Dumas, Un nez gelé and la Pipe de Jean Bart; Alphonse Daudet, la Dernière classe, and la Chèvre de M. Seguin; Legouvé, la Patte de dindon; Pouvillon, Hortibus; Loti, Chagrin d'un Vieux forçat; Moliere, l'Avare, Acte III, sc. 5 (Est-ce à votre cocher....sous la mienne) ; Victor Hugo, Waterloo, Chap. IX; Rouget de L'Isle, la Marseillaise; Arnault, la Feuille; Chateaubriand, l'Exilé; Théophile Gautier, la Chimère; Victor Hugo, Extase, Lamartine, 1'Automne; De Musset, Tristesse; Sully Prudhomme, le Vase brisé; La Fontaine, le Chêne et le Roseau.

1908: Meilhac et Halévy, l'Eté de la Saint-Martin.
1909: Labiche, le Voyage de Monsieur Perrichon.
Two papers will be set: (I) Prescribed texts and translation at sight; questions on Grammar; (2) the translation of English into French.

## History.

Great Britain and Canada from 1763 to 1885 , with the outlines of the preceding periods of British History:

The geography relating to the history prescribed.
One half examination paper.
General outlines of Greek History to the fall of Corinth.
General outlines of Roman History to the death of Augustus.
The Geography relating to the history prescribed.
One half examination paper.

## Mathematics.

Arithmetic: Elementary Rules, Fractions (Vulgar and Decimal), Contracted Methods of Computation, Square Root, Interest, Discount, Commission, Insurance, Stocks and Exchange.

Mensuration: The Rectangle, the Parallelogram, the Triangle, the Circle, the Parallelopiped, the Prism, and the Cylinder.

One examination paper.
Note: The problems proposed at this examination will be simple and direct, and in their solution neatness and accuracy will be insisted on.

Algebra.-Elementary rules; highest common measure; lowest common multiple ; fractions; square root; simple equations of one, two and three unknown quantities; indices; surds; quadratics of one and two unknown quantities.

One examination paper.
Geometry: A.-Constructions.
To construct a triangle with sides of given lengths.
To construct an angle equal to a given rectilineal angle.
To bisect a given angle.
To bisect a given straight line.
To draw a line perpendicular to a given line from a given point in it.

To draw a line perpendicular to a given line from a given point not in the line.

Locus of a point equidistant from two given lines.
Locus of a point equidistant from two given points.
To draw a line parallel to another, through a given point.
To divide a given line into any number of equal parts.
To describe a parallelogram equal to a given triangle, and having an angle equal to a given angle.

To describe a parallelogram equal to a given rectilineal figure, and having an angle equal to a given angle.

On a given straight line to describe a parallelogram equal to a given triangle, and having an angle equal to a given angle.

To find the centre of a given circle.
From a given point to draw a tangent to a given circle.
On a given straight line to construct a segment of a circle containing an angle equal to a given angle.

From a given circle to cut off a segment containing an angle equal to a given angle.

In a circle to inscribe a triangle equiangular to a given triangle.

To find locus of centres of circles touching two given lines.
To inscribe a circle in a given triangle.
To describe a circle touching three given straight lines.
To describe a circle about a given triangle.
About a given circle to describe a triangle equiangular to a given triangle.

To divide a given line similarly to another given divided line.

To find the fourth proportional to three given lines.
To describe a polygon similar to a given polygon, and with the corresponding sides in a given ratio.

To find the mean proportional between two given straight lines.

To construct a polygon similar to a given polygon, and such that their areas are in a given ratio.

To describe a polygon of a given shape and size.
B.-Theorems.

The sum of the angles of any triangle is equal to two right angles.

The angles at the base of an isosceles triangle are equal, with converse.

If the three sides of one triangle be equal, respectively, to the three sides of another, the triangles are equal in all respects.

If two sides and the included angle of one triangle be equal to two sides and the included angle of another triangle, the triangles are equal in all respects.

If two angles and one side of a triangle be equal to two angles and the corresponding side of another, the triangles are equal in all respects.

If two sides and an angle opposite one of these sides be equal, respectively, in two triangles, the angles opposite the other pair of equal sides are either equal or supplemental.

The sum of the exterior angles of a polygon is four right angles.

The gieater side of any triangle has the greater angle opposite it.

The greater angle of any triangle has the greater side opposite it.

If two sides of one triangle be equal respectively to two sides of another, that with the greater contained angle has the greater base, with converse.

If a transversal fall on two parallel lines, relations between angles formed, with converse.

Lines which join equal and parallel lines towards the same parts are themselves equal and parallel.

The opposite sides and angles of a parallelogram are equal and the diagonal bisects it.

Parallelograms on the same base, or on equal bases, and between the same parallels are equal.

Triangles on the same base, or on equal bases, and between the same parallels are equal.

Triangles equal in area, and on the same base, are between the same parallels.

If a parallelogram and a triangle be on the same base, and between the same parallels, the parallelogram is double the triangle.

Expressions for area of a parallelogram, and area of a triangle.

The complements of the parallelogram about the diagonal of any parallelogram are equal.

The square on the hypotenuse of a right-angled triangle is equal to the sum of the square on the sides.

If a straight line be divided into any two parts, the sum of the squares on the parts, together with twice the rectangle contained by the parts, is equal to the square on the whole line.

The square on a side of any triangle is equal to the sum of the squares on the two other sides + twice the rectangle contained by either of these sides and the projection of the other side on it.

If more than two equal straight lines can be drawn from the circumference of a circle to a point within it, that point is the centre.

The diameter is the greatest chord in a circle, and a chord nearer the centre is greater than one more remote. Also the greater chord is nearer the centre than the less.

The angle at the centre of a circle is double the angle at the circumference on the same arc.

The angles in the same segment of a circle are equal, with converse.

The opposite angles of a quadrilateral inscribed in a circle are together equal to two right angles, with converse.

The angle in a semicircle is a right angle; in a segment greater than a semicircle less than a right angle, in a segment less than a semicircle greater than a right angle.

A tangent is perpendicular to the radius to the point of contact; only one tangent can be drawn at a given point; the perpendicular to the tangent at the point of contact passes through the centre; the perpendicular from centre on tangent passes through the point of contact.

The angles which a chord drawn from the point of contact makes with the tangent, are equal to the angles in the alternate segments.

The rectangles under the segments of intersecting chords are equal.

If $\mathrm{OA} . \mathrm{OB}=\mathrm{OC}^{2}, \mathrm{OC}$ is a tangent to the circle through $\mathrm{A}, \mathrm{B}$ and C .

Triangles of the same altitude are as their bases.
A line parallel to the base of a triangle divides the sides proportionally, with converse.

If a vertical angle of a triangle be bisected, the bisector divides the base into segments that are as the sides, with converse.

The analogous proposition when the exterior angle at the vertex is bisected, with converse.

If two triangles are equiangular, the sides are proportional.
If the sides of two triangles are proportional, the triangles are equiangular.

If the sides of two triangles about equal angles are proportional, the triangles are equiangular.

If two triangles have an angle in each equal, and the sides about two other angles proportional, the remaining angles are equal or supplemental.

Similar triangles are as the squares on corresponding sides.
The perpendicular from the right angle of a right-angled triangle on the hypotenuse divides the triangle into two which are similar to the original triangle.

In equal circles angles, whether at the centres or circumferences, are proportional to the area on which they stand.

The areas of two similar polygons are as the squares on corresponding sides.

If three lines be proportional, the first is to the third as the figure on the first to a similar figure on the second.

Questions and easy deductions on the preceding constructions and theorems.

It is recommended that the study of formal demonstrative Geometry be preceded by a course in Practical Geometry, extending over not more than a year, and embracing the following:

Definitions; fundamental geometric conceptions and principles; use of simple instruments, as compasses, protractor, graduated rule, etc.; measurement of lines and angles, and construciton of lines and angles of given numerical magnitude; accurate construction of figures; some leading propositions in plane geometry reached by induction as a result of accurate construction of figures; deduction also employed as principles are reached and assured. At the examination questions may be given in Practical Geometry, the constructions being such as naturally spring from the prescribed course. Candidates must provide themselves with a graduated ruler, compasses, set-square and protractor.

In the formal deductive Geometry modifications of Euclid's treatment of the subject will be allowed, though not required, as follows:-

The employment of the "hypothetical construction."

The free employment of the method of superposition, including the rotation of figures about an axis, or about a point in a plane.

A modification of Euclid's parallel postulate.
A treatment of ratio and proportion restricted to the case in which the compared magnitudes are commensurable.

One examination paper.

## Elementary Experimental Science.

Physics: Use of the metre rule; use of calipers and vernier for more accurate metric measurements (e.g., diameters of wires, thickness of glass, plates, etc.) ; numerical calculations, in the metric system.

Use of balance
Specific gravity, by specific gravity bottle and hydrostatic balance, of liquids and of solids.

Boyle's law ; barometer; diffusion of gases.
Use of Fahrenheit and centigrade thermometers; determination of zero and boiling point; boiling point dependent on pressure.

Expansion of solids, liquids and gases, examples.
Specific heat; latent heat; easy numerical examples.
Transmutation of matter; indestructibility of matter.
Solution, precipitation, crystallization and evaporation.
One half examination paper.
Chemistry: Properties of hydrogen, chlorine, oxygen, sulphur, nitrogen, carbon and their different compounds, especially those of economic and industrial importance. Mixtures, solutions, chemical compounds, elements, nomenclature, laws of chemical combinations, e.g., combining weights, chemical formulæ and equations, with easy numerical examples.

## ARTICLE II.-SENIOR MATRICULATION.

1. Candidates who intend to pursue an Honour Course in the University are recommended to take the Senior Matriculation (Form IV) in as many subjects as possible.
2. Candidates for Senior Matriculation shall take English, Latin, History, Mathematics, and any two of Greek, French, German, Experimental Science (Physics and Chemistry.)
*3. Candidates who have taken forty per cent. on the Senior Matriculation or Senior Leaving papers in Latin, Greek, French, German, Mathematics, English, Chemistry, Physics, Botany, or Animal Biology, will, on payment of the pro tanto fee, not be required to take the University Junior class in the subject. As no student is allowed to pass more than five classes in a session, (see clause 5, article VIII), any one entering under this clause will not be exempt from more than five classes.
3. Any person presenting a Senior Leaving Certificate will be permitted to enter upon a University course, but in his first examination, must include either Junior Latin, Greek, French or German.
[^1]
## SUBJECTS OF SENIOR MATRICULATION.

Greek.
Translation into English of passages from prescribed texts.
Translation at sight of passages of average difficulty, similar to the authors read.

Grammatical questions on the passages from prescribed texts will be set, and such other questions as arise naturally from the context.

Translation into Greek of ordinary narrative passages of English, similar to the authors read.

The following are the prescribed texts:-
1909: Xenophon, Selections in White's First Greek Book; Herodotus, Tales ed. Farnel I-XI, Homer, Odyssey XXI; Lucian, Timon; Lysias, Pro Mantitheo and de Invalido.

Two examination papers.
1908: Xenophon, Selections in White's First Greek Book; Herodotus, Tales ed. Farnel (I-XI) ; Homer, Odyssey, XXIII; Lucian, Charon; Lysias, Contra Eratosthenem.

Two examination papers.

## Latin.

Translation into English of passages from prescribed texts.
Translation at sight of passages of average difficulty, similar in style to the authors read.

Grammatical questions on the passages from prescribed texts will be set, and such other questions as arise naturally from the context.

Translation into Latin of easy passages of English similar in style to the authors read.

The following are the prescribed texts :-
1908: Cæsar, Bellum Gallicum, Book IV., Chaps. 20-38, and Book V., Chaps. I-23; Virgil, Æneid, Book II.; Horace, Odes, Books III., IV., Cicero, In Catilinam I., III., IV.

1909: Cæsar, Bellum Gallicum, Book IV., Chaps. 20-38, and Book V., Chaps. I-23; Virgil, Æneid, Book II.; Horace, Odes, Books I. and II.; Cicero, In Catilinam I., III. IV.

Two examination papers: (I) Latin Prose, (2) Authors and Sight.

## English.

Composition: An essay, to which special importance will be attached, on one of several themes set by the examiner.

One examination paper.
Literature: The candidate will be expected to have memorized some of the finest passages. Besides questions to test the

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candidate's familiarity with, and comprehension of, the following selections, questions may also be set to determine within reasonable limits his power of appreciating literary art.

One examination paper.
1908 Tennyson, The Poet, The Lady of Shalott, Oenone, The Epic and Morte d'Arthur, St. Agnes' Eve, The Voyage, "Break, break,-break," In the Valley of the Cauteretz; Browning, My Last Duchess, "How they brought the good news from Ghent to Aix," Love among the Ruins, Home Thoughts from Abroad, Up at a Villa, Andrea del Sarto, The Guardian Angel, Prospice, An Epistle of Karshish, Cavalier Tunes; Shakespeare, Macbeth, As You Like It.

1909: Coleridge, The Ancient Mariner; Wordsworth, Michael, Influence of Natural Objects, Nutting, Expostulation and Reply, The Tables Turned, The Solitary Reaper, Ode to Duty, Elegiac Stanzas, To the Rev. Dr. Wordsworth, "She was a phantom of delight," To the Cuckoo, The Green Linnet, "Bright flower! whose home," "To a Skylark ("Ethereal minstrel!! pilgrim of the sky!"), Reverie of Poor Susan, To my Sister, "Three years she grew," September, i8i9, Upon the Same Occasion, and the following twelve sonnets:-"Two voices are there," "A flock of sheep that leisurely," "Earth hath not anything," "It is not to be thought of," "Fair star of evening," "O friend, I know not," "Milton, thou shouldst," "When I have borne in memory," "Brook! whose society," "Scorn not the sonnet," "Tax not the royal saint," "They dreamt not of a perishable home;" Shakespeare, Merchant of Venice, Henry V.

## German.

The prescription of work in grammar, the translation of English into German and sight translation is the same for honours as for pass, but the examination will be of more advanced character.

The following are the prescribed texts:-
Grimm, Rotkäppchen; Anderson, Wie's der Alte macht, Das neue Kleid, Venedig, Rothschild, Der Bär; Ertl, Himmelsschlüssel; Frommel, Das eiserne Kreuz; Baumbach, Nicotiana, Der Goldbaum; Heine, Lorelei, Du bist wie eine Blume; Uhland, Schäfer's Sonntagslied, Das Schloss am Meer; Chamisso, Das Schloss Boncourt; Claudius, Die Sterne, Der Riese Goliath; Goethe, Mignon, Erlkönig, Der Sänger; Schiller, Der Jüngling am Bache.

1908: Leander, Träumereien, pp. 45 to 90 (selected by Van Daell).

Baumbach, Der Schwiegersohn; Elz, Er ist nicht eifersüchtig ; Wichert, Post Festum.

1909: Baumbach, Waldnovellen; Zschokke, Der tote Gast.

## French.

The prescription of work in grammar, translation of English into French and sight translation is the same for honors as for pass, but the examination will be of a more advanced character.

The following are the prescribed texts:-
Lamennais, Paroles d'un croyant, Chaps. VII and XVII; Perrault, le Maître Chat ou le Chat Botté; Dumas, Un nez gelé, and la Pipe de Jean Bart; Alphonse Daudet, la Dernière classe, and la Chèvre de M. Seguin; Legouvé, la Patte de dindon; Pouvillon, Hortibus; Loti, Chagrin d'un vieux forçat; Moliére, l'Avare, Acte III, sc. 5 (Est-ce à votre cocher....sous la mienne) ; Victor Hugo, Waterloo, Chap. IX; Rouget De L'Isle, la Marseillaise; Arnault, la Feuille; Chateaubriand, I'Exilé; Theophile Gautier, la Chimère; Victor Hugo, Extase; Lamartine, l'Automne; De Musset, Tristesse; Sully Prudhomme, le Vase brisé ; La Fontaine, le Chêne et le Roseau.

1908: Chateaubriand, Mémoires d'Outre-Tombe (selections pub. Clarendon Press).

Meilhac et Halévy, l'Eté de la Saint-Martin.
1909. Labiche, le Voyage de Monsieur Perrichon; Mérimée, Quatre Contes, ed. by F. C. L. Steenderen (Holt \& Co.).

## History.

English history from the discovery of America to 1763. General outlines of Greek History to the fall of Corinth.
General outlines of Roman, history to the death of Augustus.
The geography relating to the history prescribed.
One examination paper.

## Mathematics.

Algebra: Elementary rules; highest common measure; lowest common multiple; fractions; square root; simple equations of one, two and three unknown quantities; indices, surds, quadratics of one and two unknown quantities; theory of divisors; ratio; proportion and variation; progressions; notation; permutations and combinations; binomial theorem; interest forms; annuities.

One examination paper.
Trigonometry: Trigonometrical ratios with their relations to each other; sines, etc., of the sum and difference of angles with deduced formulas; use of logarithms; solution of triangles; expressions for the area of triangles; radii of circumscribed, inscribed and escribed circles.

One examination paper.
Problemss One paper.

Geometry: A.-Exercises on the course prescribed for the Junior Examination, with special reference to the following topics-Loci; Maxima and Minima; The System of Inscribed, Escribed and Circumscribed Circles of a Triangle, with metrical relations; Radical Axis.
B.-The following additional propositions in Synthetic Geometry, with exercises thereon :-

To divide a given straight line internally and externally in medial section.

To describe a square that shall be equal to a given rectilineal figure.

To describe an isosceles triangle having each of the angles at the base double of the third angle.

Ti inscribe a regular pentagon in a given circle.
The squares on two sides of a triangle are together equal to twice the square on half the third side and twice the square on the median to that side.

If A B C be a triangle, and $A$ be joined to a point $P$ of the base such that $B P: P C=m: n$, then $n A B^{2}+m A C^{2}=(m+$ n) $\mathrm{A} \mathrm{P}^{2}+\mathrm{nB} \mathrm{P}^{2}+\mathrm{mPC} \mathrm{C}^{2}$.

In a right-angled triangle the rectilineal figure described on the hypoteneuse is equal to the sum of the similar and similarly described figures on the two other sides.

If the vertical angle of a triangle be bisected by a straight line which also cuts the base, the rectangle contained by the sides of the triangle is equal to the rectangle contained by the segments of the base, together with the square on the straight line which bisects the angle.

If from the vertical angle of a triangle a straight line be drawn perpendicular to the base, the rectangle contained by the sides of the triangle is equal to the rectangle contained by the perpendicular and the diameter of the circle described about the triangle.

The rectangle contained by the diagonals of a quadrilateral inscribed in a circle is equal to the sum of the two rectangles contained by its opposite sides.

Two similar polygons may be so placed that the lines joining corresponding points are concurrent.

If a straight line meet the sides B C, C A, A B, of a triangle A B C in $\mathrm{D}, \mathrm{E}, \mathrm{F}$, respectively, then $\mathrm{B} \mathrm{D}, \mathrm{C} \mathrm{E}, \mathrm{A} F=\mathrm{D} \mathrm{C}$, E A, F B, and conversely. (Menelaus' Theorem.)

If straight lines through the angular points $\mathrm{A}, \mathrm{B}, \mathrm{C}$ of a triangle are concurrent, and intersect the opposite sides in $\mathrm{D}, \mathrm{E}$, F , respectively, then $\mathrm{BD}, \mathrm{C} E, A . F=\mathrm{D} C, E A, F B$ and conversely. (Ceva's Theorem.)

If a point $A$ lie on the polar of a point $B$ with respect to a circle, then B lies on polar of A .

Any straight line which passes through a fixed point is cut harmonically by the point, any circle, and the polar of the point with respect to the circle.

In a complete quadrilateral each diagonal is divided harmonically by the two other diagonals, and the angular points through which it passes.

C-Elementary Analytical Geometry: Axes of co-ordinates Position of a point in plane of reference.

Transformation of co-ordinates,-origin changed, or axes (rectangular) turned through a given angle.
$+2 A=x_{1}\left(y_{2}-y_{3}\right)+\ldots+\ldots$
Co-ordinates of point dividing line joining $P_{1}\left(x_{1}, y_{1}\right)$ and $P_{2}\left(x_{2}, y_{2}\right)$ in ratio $m: n$ are

$$
\begin{aligned}
x & =\frac{m x_{2}+n x_{1}}{m+n}, y=\frac{m y_{2}+n y_{1}}{m+n} . \\
\left(P_{1} P_{2}\right)^{2} & =\left(x_{1}-x_{2}\right)^{2}+\left(y_{1}-y_{2}\right)_{2}
\end{aligned}
$$

Equations of straight lines.

$$
\begin{gathered}
\begin{array}{c}
x-x_{1} \\
x_{1}-x_{2}
\end{array}=\frac{y-y_{1}}{y_{1}-y_{2}} \\
\frac{x}{a}+\frac{y}{b}=1 \\
\frac{x-a}{\cos \theta}=\frac{y-b}{\sin \theta}=r . \\
y=m x+b . \\
y=m(x-a \% . \\
\text { Line defined by two points } \\
\text { through which it passes }
\end{gathered} \quad \begin{aligned}
& \text { Line defined by one point } \\
& \text { through which it passes, } \\
& \text { and by its direction. }
\end{aligned}
$$

General equation of ist degree, $A x+B y+C=0$, represents a straight line.

Any line through $\left(x_{1}, y_{1}\right)$ is

$$
A\left(x-x_{1}\right)+B\left(y-y_{1}\right)=0 .
$$

If $\theta$ be angle between $A x+B y+C=0$ and $A^{\prime} x+$ $B^{\prime} y+C^{\prime}=0$, then

$$
\tan \theta=\frac{A^{\prime} B-A B^{\prime}}{A A^{\prime}+B B^{\prime}}
$$

Condition of $\perp$ rity, $A A^{\prime}+B B^{\prime}=0$.
Condition of $\|$ ism, $\frac{A}{A^{\prime}}=\frac{B}{B^{\prime}}$.
Distance from $(a, b)$ to $A x+B y+C=0$, in direction whose direction cosines are $(l, m)$ is

$$
\frac{A a+B b+C}{A l+B m}
$$

distance from $(a, b)$ on $A x+B y+C=0$.

$$
=\frac{A a+B b+C}{V} \overline{A_{2}+B_{2}} .
$$

The Circle-
Equations in forms:

$$
\begin{array}{r}
x^{2}+y^{2}=r^{2} \\
(x-a)^{2}+(y-b)^{2}=r^{2} \\
y^{2}=2, x-x^{2}
\end{array}
$$

General equation $x^{2}+y^{2}+2 A x+2 B y+C=0$,

$$
\text { or }(x+A)^{2}+(y+B)^{2}=A^{2}+B^{2}-C,
$$

represents a circle with centre $(-A,-B)$ and radius

$$
\sqrt{A^{2}+B^{2}-C}
$$

Tangent at $\left(x^{\prime}, y^{\prime}\right)$ to $x^{2}+y^{2}=r^{2}$, is $x x^{\prime}+y y^{\prime}=r^{2}$.
Normal is $\frac{x}{x^{\prime}}=\frac{y}{y^{\prime}}$.
Tangent in form.

$$
y=m x+r \sqrt{1+m^{2}} .
$$

Pole being $\left(x^{\prime}, y^{\prime}\right)$, polar is $x x^{\prime}+y y^{\prime}=r^{2}$.
If pole move along a line, polar turns about pole of that line.

Square of length of tangent from

$$
\begin{gathered}
\left(x^{\prime}, y^{\prime}\right) \text { to } x^{2}+y^{2}+2 A x+2 B y+C=0 \\
\text { is } x^{\prime 2}+y^{\prime 2}+2 A x^{\prime}+2 B y^{\prime}+C .
\end{gathered}
$$

Radical axis of

$$
\begin{aligned}
& x^{\circ}+y^{2}+2 A x+2 B y+C=0 \\
& x^{2}+y^{2}+2 A^{\prime} x+2 B^{\prime} y+C^{\prime}=0 .
\end{aligned}
$$

Easy exercises on the preceeding propositions.

## Physics.

Mechanics: Measurement of velocity; uniformly accelerated rectilineal motion; metre; units of force, work, energy and power; equilibrium of forces acting at a point; triangle, parallelogram, and polygon of forces; parallel forces; principles of moments ; centre of gravity; laws of friction; numerical examples.

Hydrostatics: Fluid pressure at a point; pressure on a horizontal plane; pressure on an inclined plane; resultant vertical pressure, and resultant horizontal pressure, when fluid is under air pressure and when not; transmission of pressure ; Bramah's press; equilibrium of liquids of unequal density in a bent tube; the barometer; air pump; water pump, common and force; siphon.

Electricity: Voltaic cells, common kinds; chemical action in the cell; magnetic effects of the current; chemical effects of the current; voltameters; electroplating; astatic and tangent galvanometers ; simple notions of potential; Ohm's law ; shunts; measurement of resistance; electric light, arc and incandescent; current induction; induction coil; dynamo and motor; the joule and watt; electric bell; telegraph; telephone; elements of terrestrial magnetism.

One examination paper.

## Chemistry.

Chemical and physical reactions, rates of reactions, reversible reactions, chemical equilibrium. The practical study of the following elements with their most characteristic compounds, having regard to Mendelejeff's classification of the elements, and some of the most important economic and industrial applications; hydrogen, sodium, potassium, magnesius, zinc, calcium, strontium, barium, boron, aluminium, carbon, silicon, tin, lead, nitrogen, phosphorus, arsenic, antimony, bismuth, oxygen, sulphur, fluorine, chlorine, bromine, iodine, maganese, iron, copper, nickel. A report must be furnished showing the amount and nature of the laboratory work done by each candidate and the teacher's opinion of his proficiency.

One examination paper.

## Biology.

Elements of Zoology: The candidate will be examined practically on his acquaintance with the structure of the various types prescribed below, and must be prepared to sketch the specimens submitted to him.

Vertebrate Types: I. The fish:-Any one of the common fresh-water fish of Ontario may be employed for the purpose;
special attention should be given to the organs of locomotion, circulation, respiration. As several species are easily obtainable this class may be employed for studying the principles of zoological nomenclature.
2. The frog:-Comparison with the fish as to the organs above mentioned-observation of the development of the spawn of one or more Amphibia.
3. The reptile:-A study of the external form of a turtle and a snake, and comparison of both with a lizard.
4. The bird:-Special attention should be given to the plumage, the bill and feet, and to the modifications of the skeletal, muscular and respiratory systems in connection with aerial life.
5. The mammal:-Characters of the chief domesticated and wild mammals of Ontario must be studied, as well as the main facts of internal structure of one of the smaller forms (the rabbit, e.g.). Comparison of the teeth and feet of the pig, horse, sheep, rabbit, dog, mole, bat.

Invertebrate Types: I. Study of the Crayfish as a type of the arthropods. Comparison of the external form of the Crayfish with an insect (e.g., grasshopper, cricket or cockroach) also with a millipede and a spider.

2 Unsegmented and segmented worms.
3. Fresh water mussel and snail.
4. A fresh water unicellular animal such as an Amoeba or Paramecium.

The natural habits of the various animals studied.
Elements of zoological classification based on forms studied.
2. Elements of Botany: The examination will test whether the candidate has practically studied representatives of the flowering plants of the locality in which the preparatory school is situated, and representative plants.
ARTICLE III.-ARTS MATRICULATION SCHOLARSHIPS, 1907.

A Scholarship cannot be held without attendance on the University classes. To be eligible for
き
must be fully matriculated.
awarded on the July Departmental Hon-
speci-
Honour standing in the subjects
Scholarships must take Candidates for Honour Matriculation
fied in connection with the Scholarships. I.-The following Scholarships, of the Matriculation examinations.

- кวuот fo aэınos pun aux

| i. Prince of Wales. \$60. Founded by H. M. King Edward VII. | \$100 |
| :---: | :---: |
| 2. Governor-General. \$75. Given by His Excellency Earl Grey, LL.D. .. . . . . . . . . . . . . . . . . . . . | 100 |
| 3. Chancellor. \$ioo. Founded by Sir Sandford Fleming, K.C.M.G., Chancellor ..... . ........ | 100 |
| 4. Mackerras Memorial. \$70. Founded in memory of the late Prof. Mackerras | 100 |
| 5. Williamson No. i. $\$ 65$. Founded in memory of the late Vice-Principal, Rev. Dr. James Williamson. | 100 |
| 6. Williamson No. 2. $\$ 60$. Founded in memory of the late Vice-Principal, Rev. Dr. James Williamson. | 100 |

ARTICLE III.-ARTS MATRICULATION SCHOLARSHIAS, 1907.-(Continued.)

| Name and Source of Money. | Free Tuition. | Total Value. | Subjects. |
| :---: | :---: | :---: | :---: |
| 7. Leitch Memorial No. i. \$60. Founded in memory of the late Principal Leitch................. | 100 | 160 | English, Chemistry, and Physics or Botany. |
| 8. Nicholls Foundation No. i. $\$ 50$. Founded by the late Charlotte Nicholls, of Peterboro'..... <br> 9. Mayor. \$50. Given by the Mayor of Kingston. . | 100 100 | 150 150 | English, French and German. Latin, French and German. |
| 10. Mowat. $\$ 50$. Founded by the late John Mowat, Esq., of Kingston. | 100 | 150 | Mathematics. |
| 11. Forbes McHardy. $\$ 25$. Founded by the late Forbes McHardy, Esq., Toronto | 100 | 125 | Mathematics, French and German. |
| 12. McLachlan. \$125. Given by R. McLachlan, Esq., Oshawa | 100 | 225 | English, Latin and French. |
| II.-The following Scholarships, of the values Junior Matriculation examinations. | cified, | awa | led on the July Departmental |
| Name and Source of Money. | Free Tuition. | Total <br> Value. | Subjects. |
| 1. Nicholls Foundation No. 2. \$35. Founded by the late Charlotte Nicholls, Peterboro'........ | \$100 | \$I35 | General proficiency. |
| 2. McDowall. \$25. Founded in memory of the late Rev. Robert McDowall | 100 | 125 | Do. |
| 3. Nicholls Foundation No. 3. $\$ 20$. Founded by the late Charlotte Nicholls, Peterboro'......... | 100 | 120 | Do. |

ARTICLE III.-ARTS MATRICULATION SCHOLARSHIPS, 1907.-(Continued.)
III.-The following Scholarships have been endowed under special conditions.


## ART. IV. UNIVERSITY PRIZES, MEDALS AND SCHOLARSHIPS.

## SPECIAL SCHOLARSHIPS.

## The Rhodes Scholarship in Canada.

Queen's University will, in January, 1912, select a candidate under the Rhodes bequest. The scholar will begin residence at Oxford in October of the year for which he is elected.

The Scholarship is tenable for three years, and is of the value of $f_{3} 00$ per annum.

## ELIGIBILITY OF CANDIDATES.

I. Candidates shall be British subjects and unmarried. They must have passed their nineteenth but not have passed their twenty-fifth birthday, on October Ist of the year for which they are elected.
2. An elected scholar must have reached at least the end of his sophomore or second year's work at some recognized degreegranting University or College of Canada.
3. Candidates may elect whether they will apply for the Scholarship of the Province in which they have acquired any considerable part of their educational qualification, or for that of the Province in which they have their ordinary private domicile, home or residence. They must be prepared to present themselves for examination or election in the Province they select. No candidate may compete in more than one Province, either in the same or in successive years.
4. Only candidates who have passed an equivalent to the Oxford Responsions Examination, or those who are exempted from Responsions by the Colonial Universities' Statute, are eligible for election.

Queen's University having applied for and been admitted to the privileges of the Colonial Universities' Statute, candidates coming from Queen's University who have fulfilled the conditions are accepted as candidates for Rhodes' Scholarships without further examination.

## METHOD OF SELECTION.

In accordance with the wish of Mr . Rhodes, the Trustees desire that "in the election of a student to a Scholarship, regard shall be had to (I) his literary and scholastic attainment, (2) his fondness for and success in manly out-door sports, such as cricket, football and the like, (3) his qualities of manhood, truth, courage, devotion to duty, sympathy for and protection of the weak, kindliness, unselfishness and fellowship, and (4) his
exhibition during school-days of moral force of character, and of instincts to lead and to take an interest in his schoolmates." Mr . Rhodes suggested that (2) and (3) should be decided in any School or College by the votes of fellow-students, and (4) by the Head of the School or College.

Where circumstances render it impracticable to carry out the letter of these suggestions, the Trustees hope that every effort will be made to give effect to their spirit, but desire it to be understood that the final decision must rest with the Committee of Selection.

Rhodes Scholar, 1905: J. M. Macdonnell, M.A.

## Exhibition of 185 I , Science Research Scholarship.

This scholarship, of the annual value of $£_{150}$ stg., is awarded by Her Majesty's Commissioners for the Exhibition of 1851 to students who have given evidence of capacity for original research, and (except in very special circumstances) are under 30 years of age.

The nomince must be a British subject, must have been a bona fide student of this University for three years, must have been a student of this University for a full year immediately before his nomination, must be a student of this University at the time of his nomination, (or he must have been a student at this University for a full year ending within twelve months prior to his nomination and since ceasing to be such student must have been engaged solely in scientific study) and must pledge himself not to hold any position of emolument whilst holding the scholarship. He is recommended to the Commissioners by the Senate of the University. The scholarship may be held for a second year, if the report of the first year's work be satisfactory to the Commissioners. The scholar will in the absence of special circumstances, be required to proceed to an institution other than that by which he is nominated, and there pursue some investigation likely to promote technical industries or scientific culture. The particular investigation the student proposes to pursue must be stated before a scholarship can be awarded.

The next recommendation will be made by the Senate in April, 1909.

Science Research Scholars recommended by Queen's University :-

Norman R. Carmichael, M.A., I894.
Thomas L. Walker, M.A., 1896.
Frederick J. Pope, M.A., 1898.
Wm. C. Baker, M.A., 1900.
C. W. Dickson, M.A., 1901.
C. W. Knight, B.Sc., 1904.
F. H. McDougall, M.A., B.Sc., 1905.

## PRIZES.

These are prizes for literary articles, essays, etc., as specified under each particular prize, and are open to students of the present or preceding session.

Conditions of Competition.-I. Competitive papers must be given to the Registrar not later than 2Ist of March.
2. Each paper is to bear a motto, instead of the author's name, and must have attached to it a sealed envelope, bearing the same motto and containing a written declaration over the author's signature, to the effect that it is his unaided composition.
3. The envelope attached to successful papers shall be opened and the writer's name made known at the Convocation at the close of the session.
4. The best productions must be reported by the examiners to be of sufficient merit.
5. All successful productions shall be the property of the University, and be at the disposal of the Senate.

## A.-LEWIS.

Value $\$ 25$. Given for the best critical essay on Isaiah VII., 10-16.
B.-GOWAN FOUNDATION NO. I.

Value $\$ 25$. Given by the 110 . Sir James R. Gowan, K. C. M. G., for the best essay on A Comparison of the Canadian and American Systems of Banking.
C.-GOWAN FOUNDATION NO. II.

Value $\$ 25$. Given by the Hon. Sir James R. Gowan, K. C. M. G., for "The best Collection of Canadian Plants." The collection must be delivered before the 15 th of December.
D.-GOWAN FOUNDATION NO. III.

Value $\$ 25$ in Books. Given by the Hon. Sir James R. Gowan, K. C. M. G., in Honours in Political Science.
E.-LATIN AND GREEK COMPOSITION.

Two prizes, each of the value of $\$ 10$ in books, are offered for competition for the best composition in Latin and Greek prose respectively. Subjects for composition, 1907-1908: Latin Prose, Hallam's Middle Ages, Chapter IX, Part I, § 2, "No circumstance.... § 3, aroused from indolence." Greek Prose, Sargent and Dallin's Materials and Models for Greek Prose Composition (Longman's), Part VI, Nos. 72, 73, 74, 75.

## F. - SPECIAL FRENCH AND GERMAN PRIZES.

Two prizes each of the value of $\$ 10$ in books, are offered for the best examination in April in Senior French and Senior German respectively.
G.-JAMES C. ROGERS PRIZE IN ENGLISH.

A prize of the value of $\$ 5$ in books. Awarded by James C. Rogers, B.A., to the student obtaining highest standing in Senior English.

## H.-MARY fRASER M'LENNAN PRIZE in HEBREW.

A prize of the value of $\$ 12$ founded in memory of Mary Fraser McLennan, of Lancaster, by her sons. Awarded to the student obtaining highest standing in Junior Hebrew.

## SCHOLARSHIPS IN ARTS AND PRACTICAL SCIENCE.

I. -THE CHANCELLOR'S PRACTICAL SCIENCE SCHOLARSHIP.

Value \$70. - Given by Sir Sandford Fleming, C.E., K.C.M.G., LL.D., Chancellor of the University. A Awarded to the Practical Science student passing the best examination at the end of first year.
2.-NEW YORK QUEEN'S ALUMNI SCHOLARSHIP IN BIOLOGY.

Value $\$ 50$. Given by the New York Queen's University Society and awarded to the student in Arts or Medicine who obtains the highest number of marks in the honour examinations in physiology and histology.

## 3.-THE ANN ELIZA STAFFORD SCHOLARSHIP IN ANIMAL BIOLOGY.

Value $\$ 40$. Founded by T. T. Bower, Esq., Toronto. Awarded to a graduate in first-class honours in Animal Biology who is competent to undertake research work in physiology. The holder must be willing to devote himself exclusively to research and must carry on his investigations in the University laboratories for at least one year from the date of his appointment.

> 4.-THE M. C. CAMERON SCHOLARSHIP IN GAELIC.

Value $\$ 40$. Founded by the late M. C. Cameron, M.P., Goderich. Awarded to the best Gaelic scholar, reader and speaker. The examination takes place after the September Matriculation examination. Work prescribed: Ossian's Fingal, Duncan Ban MacIntyre's Poems, Blackie's Language and Literature of the Scottish Highlands. Translation at sight of Gaelic into English and English into Gaelic. This Scholarship will not be awarded to any candidate who does not take at least fifty per cent. of the total number of marks in the examination.

## 5.-THe hiram Calvin SCholarship in latin.

Value \$25. Given by Hiram Calvin, M.P., Kingston, to encourage the study of Latin in the University. Awarded on the result of the April examinations in Senior Latin, to the best student who is proceeding to the Honour Course in Latin. Not to be held by any student unless in actual attendance. Not necessarily to be awarded, unless a certain degree of merit is shown.

> 6.-THE MACLENNAN SCHOLARSHIP IN GREEK.

Value $\$ 25$. Given by Hon. Justice Maclennan, LL.D. Ottawa, to encourage the study of Greek in the University.

Awarded on the results of the April examinations in Senior Greek to the best student who is proceeding to the Honour Course in Greek. Not to be held by any student unless in actual attendance, and not necessarily to be awarded unless a certain degree of merit is shown.
7.-THE 'OI FELLOWSHIP IN ENGLISH.

This Fellowship was established by the Class which graduated in 190I. It is awarded by the Senate to the student who is to act as Assistant Tutor in English during the following session.

## MEDALS.

University medals will be awarded to the Candidates who obtain the highest number of marks in the Honour courses leading to the degree of M.A.

Candidates for medals will be required at the final examination to take all the Honour papers in the work of the courses which they select. No medal will be awarded to any candidate who fails to obtain threefourths of the whole number of marks.

Any tutor engaged in teaching the Honour work of a class on which the medal in that class is awarded shall not compete for the medal.

## SCHOLARSHIPS IN THEOLOGY.

## 1.-Matriculation Scholarships.

I.-DAVID STRATHERN DOW.

Founded in 1886 by David Strathern Dow, Esq., Whitby, Ont. Value $\$ 75$.
2.-DOMINION.

Founded in 1870 by the late Walter Lawson, Scotland. Value \$70.
3.-BUCHAN NO. I.

Founded in 1875 by the late Rev. Alexander Buchan, Stirling, Ont. Value $\$ 65$.

$$
\text { 4.-BUCHAN NO. } 2 .
$$

Founded by the late Rev. A. Buchan. Value $\$ 55$.

$$
\text { 5.-BUCHAN NO. } 3 \text {. }
$$

Founded by the late Rev. A. Buchan. Value $\$ 45$. 6.-m'intyre.

Founded in 1876 by Mrs. Margaret W. McIntyre, Perth, Ont. Value \$20.

## II.-Scholarships Awarded at Close of Session.

I.-SARAH M'CLELLAND WADDELL MEMORIAL.

Founded in 1899, by Hugh Waddell, Esq., South Monaghan, Ont., in memory of his mother, Sarah McClelland. Value \$izo. Awarded upon the Sessional Examination at the close of the first year in divinity, Old and New Testament Exegesis, Church History and Elocution.

> 2.-THE CHANCELLOR'S.

Founded by Sir Sandford Fleming, K.C.M.G. Value \$70. Awarded to the student of the second year who takes the highest standing in the Sessional Examinations.

> 3.-SPENCE.

Founded in 1879, by the late Rev. Alex. Spence, D.D., formerly minister of St. Andrew's Church, Ottawa. Value $\$ 60$. Awarded upon the Sessional Examination at the close of the first year in Divinity, Old and New Testament Exegesis, and Apologetics, or Hebrew. Tenable during second and third year in Theology.

## 4.-LEITCH MEMORIAL NO. 2.

Founded in 1867 , in memory of the late Principal Leitch, by subscribers in Scotland and Canada. Value \$80. Awarded upon a Sessional Examination, and tenable during three successive years, should the successful candidate, after the completion of his Theological curriculum at this University, continue his studies at this or any European University. Candidates must have the degree of B.A. The next competition will take place in 1908. Subjects of examination: The Epistles to the Romans and Hebrews in Greek, Psalms I-XXV in Hebrew, Butler's Analogy, and the Divinity Lectures of the session.
5.-ANDERSON NO. I.

Founded by the late Robert Anderson, Esq., Montreal. Value \$40. Awarded in the first year Divinity.

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\text { 6.-ANDERSON NO. } 2 .
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Founded by the late Robert Anderson, Esq. Value \$35. Awarded in second year Divinity.
7.-THE TAWSE.

Founded by Miss Tawse, King, Ont. Value \$40. Awarded in third year Divinity.
8.-TORONTO.

Founded by the Ladies' Association of St. Andrew's Church, Toronto. Value $\$ 60$. Awarded in second year Hebrew. 9.-ST. ANDREW'S CHURCH, TORONTO.

Given by the Session of St. Andrew's Church, Toronto. Value $\$ 45$. Awarded in Old Testament Exegesis.
IO.-RANKINE NO. I.

Founded in 188i, by the late Alexander Rankine, Esq., Leamington, England. Value \$45. Awarded in Apologetics.

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\text { II.-RANKINE NO. } 2 .
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Founded by the late Alexander Rankine, Esq., Leamington, England. Value \$45. Awarded in New Testament Exegesis.
I2.-GLASS MEMORIAL.

Founded in memory of the late Henry Glass, Esq., of Sarnia, by his widow. Value $\$ 30$. Awarded in Church History.
13.-MACKIE.

Given by the Rev. John Mackie, M.A., D.D., St. Andrew's Church, Kingston, for the best essay on The Old Testament Teaching on the Subject of Sacrifice. Essays to be handed in not later than Feb. 15th, 1908. For rules of competition see under prizes. Value $\$ 25$ in books. May be taken by a student holding another scholarship.
14.-JAMES ANDERSON BURSARY.

Founded by the late James Anderson, Acton, Ont. Value \$25. Awarded by the Senate to a student who can preach in Gaelic.

## 15.-WILLIAM MORRIS BURSARY.

Founded by the late Hon. Alexander Morris, in memory of his father. Value $\$ 50$. Awarded bv the Senate to a Divinity student taking a post-graduate course in the University.

## PRIZES AND SCHOLARSHIPS IN MEDICINE.

r. The Dr. Hayunga Prize for the best dissection of an upper extremity. This prize consists of some standard work on Surgery, and is open to all students in Medicine.
2. At the end of the second session:

A prize of $\$ 25.00$ to be awarded to the student making the highest number of marks on the year's examinations in Anatomy, Physiology, Histology and Chemistry, Theoretical and Practical.
3. The New York Alumni Association Scholarship of $\$ 50.00$. Awarded to the student making the highest marks in honour Physiology and Histology papers of the Arts course. Open also to Arts students in Honour Animal Biology.
4. At the end of the second session.

Some standard work on Medicine (value $\$ \mathrm{io}$ ), presented by Dr. Geo. Hayunga, of New York, will be awarded to the student making the highest percentage of marks on the year's examination in Materia Medica, Therapeutics and Pharmacy.
5. The Dr. McCabe prize of a standard work on Pathology, for the best written and practical examination on Pathology.
6. At the end of the fourth session:

The Chancellor's Scholarship of \$70.00.
This Scholarship is open to students who take the examinations of the Ontario Medical Council, and is tenable only on condition that during the following year the winner pursuesi, the studies of the fifth session at Queen's as prescribed in the Calendar, or studies in Europe for a like period.

This Scholarship will be awarded to the student who has made the highest number of marks on all examinations for the four years' course.
8. A University Medal to the student making the highest number of marks in the examinations in Practice of Medicine, Clinical Medicine, Pathology, Bacteriology, Sanitary Science and Jurisprudence.
9. A University Medal to the student making the highest number of marks in Surgery, Clinical Surgery, Obstetrics and Gynæcology, Medical and Surgical Anatomy.

10-12. Three House Surgeoncies at the Kingston General Hospital, of twelve months each, are to be awarded. These appointments must be approved by the Board of Governors of the Kingston General Hospital.

A House Surgeoncy and the Chancellor's Scholarship cannot be held by the same student, but a student winning both may elect which he will hold.
13. A prize of $\$ 25.00$, given by Dr. C. K. Clarke, to the fourth year student passing the best examination on the subject of Mental Diseases.
14. A prize of a standard work, given by Dr. D. E. Mundell, for the best examination in Medical and Surgical Anatomy.
15. Two Clinical Assistants are appointed to the staff of the Rockwood Hospital for the Insane to work during the summer. Applications must be made to Dr. E. Ryan, Supt., by whom the appointments are determined, regard being had to the special qualifications necessary for such work.

## ARTICLE V.-TEACHER'S CERTIFICATE.

I. Teachers' Certificates which are of sufficiently recent date will be accepted pro tanto.
2. Second Form Primary Public School Leaving, or Part I Junior Leaving certificates will be accepted as the equivalent of Part I Matriculation, and Second Class and Part II Junior Leaving certificates for Part II Junior Matriculation, so far as the subjects correspond.
3. Any person presenting an Ontario Junior Leaving certificate or equivalent certificate from any of the othor Provinces will be permitted to enter upon a University course in Arts, but he must the first year of his course come up for examination either in the Matriculation work or Junior class work in Latin, and must in his first or second year come up for examination either in the Matriculation or Junior class work in one of Greek, French, German.
4. First Class, Senior Leaving, or Form IV certificates of Ontario will be accepted for Senior Matriculation so far as they cover the subjects of matriculation.
5. Any person presenting a Senior Leaving certificate of Ontario will be permitted to enter upon a University course, but with his first examination must include either Junior Latin, Greek, French or German.
*6. Candidates who have taken forty per cent. on the Senior Matriculation or Senior Leaving papers in Latin, Greek, French, German, Mathematics, English History, Chemistry, Physics, Botany, or Animal Biology, will, on payment of the pro tanto fee, not be required to take the University Junior Class in the subject. As no student is allowed to pass more than five classes in a session (see clause 5, article VIII, any one entering under this clause will not be exempt from more than five classes. Students who are allowed four classes may complete their course within three years.
7. Certificates from the different provinces will be accepted for the Junior Leaving and Senior Leaving certificates of Ontario as follows:-


## ARTICLE VI.-EXTRA-YURAL STUDENTS.

I. A method of taking the work without attendance has been established with a view to providing for those who wish to continue their studies and yet are for any reason unable to attend the University.

The work is as nearly as possible identical with that taken up by intra-mural students and all examinations must be written on in the regular way.

[^2]Candidates for a degree must, before being registered, pass the Matriculation examination or its equivalent.

Students are strongly advised to attend for the latter part of the course if possible. If this is not feasible they should not attempt more than a pass course.
2. Extra-mural students should register before October Ist in order that they may receive tutorial assistance for the full session. The registration fee of $\$ 10$ and complete tutorial fees for the session should be sent to the Registrar together with the registration form supplied on request.

The tutorial fee for each Junior class and for Economics, English Constitutional History, Pass Botany, Pass Animal Biology, Pass Geology or Pass Mineralogy is \$3.

For each Senior class and for Politics or Medieval History the fee is $\$ 5$.

For each Honour class or for each group or part of a group of Honour Mathematics the fee is $\$ 5$.

Students who have been granted any allowance on work already taken elsewhere must pay a pro tanto fee of \$io to have this allowance entered.

On receipt of the proper fees a registration card and the first instalment of work to be done will be forwarded. Students should address their work and all inquiries to "The Tutor in (whatever the subject may be), Queen's University, Kingston, Ont." Date of each essay or exercise coming in and of each returned criticism or fresh piece of work going out will be tabulated at the college office in order that all work may be traced.

Students wishing to write on additional examinations in September may pay the tutorial fees for these subjects in April and receive tutorial assistance in them through the Summer.*

Attention is called to the fact that if assistance is required in any subject during the session and also during the Summer months the tutorial fee must be paid twice.

[^3]Extra-mural students who enter at Christmas may have extra-mural fees applied on intra-mural charges and need then only pay the balance.

Cheques or Drafts will be received at par on any place where The Merchants' Bank of Canada has an agency, otherwise add 13 cents per $\$ 100$ to cover bank charges, or remit by Post-office or Express order.
3. Extra-mural students must write the essays and exercises prescribed and send them at the dates specified. For information regarding essays and exercises, see the sections concerning extra-mural students in "Subjects of study for B.A. and M.A."
4. List of centres where extra-mural examinations are held may be had on application to the Registrar. If for special reasons a candidate is unable to write at one of these, a new centre may be established on payment of a fee of \$5.00.

The University Examination Fee of \$io for Pass classes or $\$ 12$ for Honour or Pass and Honour classes must be paid to the Registrar in advance by all candidates wishing to take examinations.

Students applying to write at outside centres must send also \$I for each half-day examination and \$I for each oral examination, to remunerate presiding examiner.
5. Students must make application to the Registrar, at least three weeks before the beginning of the Universitv examinations in April and September, for the papers on the particular subjects upon which they propose to write.
6. Oral examinations in final Honour Moderns and Practical examinations in Science must be taken at the University.

## ARTICLE VII-PERCENTAGE REQUIRED.

In determining a student's standing at the sessional examinations, the Professors in the different departments are empowered to take into account a student's entire class record.

To take Pass Standing, 40 per cent.
To take Third Class Honours, 50 per cent.
To take Second Class Honours, 66 per cent.
To take First Class Honours, 75 per cent.

## ARTICLE VIII.-PASS COURSES LEADING TO DEGREE OF B.A.

I. The course after Matriculation extends over four sessions, but students who are allowed four classes (see clause 6, Art. V) may complete their course in three years.
2. Pass and Honour examinations are held annually in April and Pass examinations in September also.
3. The degree of B.A. will be conferred on candidates who take-
(a) Pass standing in the Pass classes and second or third class Honours in the Honour classes of any of the Honour courses, or
(b) Pass standing in the Pass classes and at least third class Honours in the Honour classes (if any) in either of the following pass courses:

## COURSE I.

A.-(I) Junior and Senior Latin.
(2) Junior and Senior Greek. (a) !
(3) Junior and Senior French. Any one
(4) Junior and Senior German.
B.-(I) Junior and Senior English.
(2) Mental and Moral Philosophy.
(3) Mediæval History or Economics.
(4) Junior Mathematics.
C.-Any two of the Junior Physics, Junior Chemistry, Botany, Animal Biology, Mineralogy, Geology, Junior Hebrew.
D.-Any two of the following:
(I) Any two not taken under B, of Mediæval History, English Constitutional History, Economics, Politics.
(2) Junior and Senior Greek.*
(3) Junior and Senior French.*
(4) Junior and Senior German.*
(5) Senior Hebrew.
(6) Any two of Senior Mathematics, Senior Physics, Senior Chemistry and the classes not taken in C.
(7) Any other two of those in (6).
(8) Preliminary Honours in either Latin, Greek, French, German, History, Philosophy, Political Science, Physics, Botany, Animal Biology, Chemistry, Mineralogy or Geology.
(9) Any other one of those in (8).
(10) Intermediate Honours in English.
(II) Honours in Mathematics, Group I.
(I2) Final Honours (at least second class) in any class in (8), ( IO ), (II).
(I3) Experimental Honour Physics.
*Only for those who have not taken them.
(a) Students taking Greek will be required to take only one of the classes in C .

COURSE II.
A.-I. Junior Latin.
2. Junior Greek.
3. Junior French.
4. Junior German.
Any two.
B.-I. Junior and Senior English.
2. Mental or Moral Philosophy.
3. Junior and Senior Mathematics.
4. Junior Physics.
5. Junior Chemistry.
C.-Any two of: Botany, Animal Biology, Mineralogy, Geology, Senior Chemistry, Senior Physics.
D.-Any four of the following :-
(1) Senior Latin.
(2) Senior Greek.
(3) Senior French.
(4) Senior German.
(5) Junior Hebrew.
(6) Mediæval and English Constitutional History.
(7) Economics and Politics.
(8) Moral Philosophy.
(9) Any other two of those in C.
(Io) Any other two of those in C.
(II) Preliminary Honours in either Political Science, Physics, Botany, Animal Biology, Latin, Greek, French, German, History, Philosophy, Chemistry, Mineralogy or Geology.
(12) Any other one in (II).
(I3) Any other one in (II).
(I4) Any other one in (ir).
(15) Intermediate Honours in English.
(I6) Honours in Mathematics, Group I.
(17) Final Honours (at least second class) in any class in (II), (I5) or (I6).
(18) Experimental Honour Physics.

COURSE III.
Course for B.A. leading to the Degrees of B.A. and M.D. in six years.
Students will note that the combined B.A., M.D. course requires attendance for four sessions in order to comply with the regulations of the Ontario Medical Council.
A.-I. Junior Latin.
2. Junior Greek.
3. Junior French.
4. Junior German.

Any two.
B.- I. Junior and Senior English.
2. Mental or Moral Philosophy.
3. Junior Mathematics.
C.- I. Junior Physics and Junior Chemistry.
2. Animal Biology and Medical Botany.
3. Junior and Senior Materia Medica.
4. Junior and Senior Anatomy.
5. Senior Physiology and Histology.
6. Senior Chemistry.
D.-I. Preliminary Honour Chemistry.
2. Preliminary Honour Animal Biology.

Examination on Translation in French or German at end of second, third and fourth years. (See page 82.)
4. No student is allowed to take a Senior class before passing the Junior in the same subject.
5. No student is allowed to attend or pass more than five classes in any one year. A sixth class may be added if it be a subject in which he has already failed.
6. Students should take the Pass classes in English, Classics, French, German and Mathematics in the first two years of their course.

## SIX YEARS' COURSES, B,A. AND B.Sc.

Students taking these courses are required to register the first two years in Arts alone and pay the class and registration fees in Arts, to register the
second two years in both Arts and Mining, to pay both registration fees and the Mining Class fees and to register the last two years in Mining only, paying registration and class fees. Arts classes are subject to the regulations in the Arts calendar and Mining classes to the regulations in the Mining Calendar.

## A.-MINING ENGINEERING.

First Year.
\(\left.\begin{array}{l}Junior Latin, <br>
Junior Greek, <br>
Junior French, <br>

Junior German,\end{array}\right\}\) Any two. $\quad$| Junior English, |
| :--- |
| Mathematics I, |
| Phyșics I, |

Senior English, Junior Chemistry,

Mathematics II,
Physics II,

Second Year.

Mental Philosophy,
Senior Latin, Senior Greek, Senior French, Senior German,
Third Year.

Fourth Year.
Geology I,
Preliminary Honour Chemistry, General Engineering I,
Preliminary Honour Mineralogy, Drawing II,
Descriptive Geometry,
Surveying I,

Fifth Year.
Same as third year B.Sc. course.
Sixth Year.
Same as fourth year B.Sc. course.

## D.-CHEMICAL ENGINEERING. <br> First Year.

\(\left.\begin{array}{ll}Junior Latin, <br>
Junior Greek, <br>
Junior French, <br>

Junior German,\end{array}\right\}\) Any two. | Junior English, |
| :--- |
| Mathematics I, |
| Physics I, |

Senior English, Junior Chemistry,

Physics II, Mathematics II,

Second Year.
Mental Philosophy,
Senior Latin, Senior Greek, Any one Senior French, Senior German,
Third Year.
$\left.\begin{array}{l}\text { Economics, } \\ \text { Medieval History, }\end{array}\right\}$ Any one. Workshop I, Drawing I,

Senior Chemistry, Surveying I,

Pass Mineralogy,
Fourth Year.
Politics, ©ualitative Analysis,
Moral Philosophy,
Preliminary Honour Latin,
Preliminary Honour French,
Preliminary Honour German, Intermediate Honour English,

Workshop II, General Engineering I,

Fifth Year.
Same as third year B.Sc. course.
Sixth Year.
Same as fourth year B.Sc. course.

## E.-CIVIL ENGINEERING.

First Year.
$\left.\begin{array}{l}\text { Junior Latin, } \\ \text { Junior Greek, } \\ \text { Junior French, } \\ \text { Junior German, }\end{array}\right\}$ Any two.

Junior English, Mathematics I, Physics I,

Second Year.
Mental Philosophy,
Senior Latin, Senior Greek, Any one. Senior French, Senior German,

Third Year.
$\left.\begin{array}{l}\text { Economics, } \\ \text { Medieval History, }\end{array}\right\}$ Any one.
Workshop I, Drawing I,
$-67-$
Fourth Year.
Politics,
Moral Philosophy,
Preliminary Honour Latin,

Geology I,
Drawing II,
Workshop II, Descriptive Geometry,

Preliminary Honour French, Preliminary Honour German, Intermediate Honour English, $\int<$ Mapping I, General Engineering I, Surveying II.

Fifth Year.
Same as third year B.Sc. course.
Sixth Year.
Same as fourth year B.Sc. course.

## F.-MECHIANICAL ENGINEERING.

First Year.
\(\left.\begin{array}{l}Junior Latin, <br>
Junior Greek, <br>
Junior French, <br>

Junior German,\end{array}\right\}\) Any two. $\quad$| Junior English, |
| :--- |
| Mathematics I, |
| Physics I. |

Second Year.
\(\left.\begin{array}{l}Mental Philosophy, <br>
Senior Latin, <br>
Senior Greek, <br>
Senior French, <br>

Senior German,\end{array}\right\}\) Any one. | Mathematics II, |
| :--- |
| Senior English, <br> Junior Chemistry. <br> Physics II. |

Third Year.

| Economics, <br> Medieval History, |  |
| :--- | :--- |
| Workshop I, Any one. | Senior Chemistry, <br> Pass Mineralogy, |
| Surveying I. |  |

Drawing II, III, and IV, Descriptive Geometry,

General Engineering I.

Senior Chemistry, Pass Mineralogy, Surveying I.

Workshop II,
Politics, Moral Philosophy, Preliminary Honour Latin, Preliminary Honour French, Preliminary Honour German, Intermediate Honour English,

Fifth Year.
Same as third year B.Sc. course.
Sixth Year.
Same as fourth year B.Sc. course.

## G.-ELECTRICAL ENGINEERING.

First Year.
$\left.\begin{array}{l}\text { Junior Latin, } \\ \text { Junior } \\ \text { Greek, } \\ \text { Junior French, } \\ \text { Junior German, }\end{array}\right\}$ Any two.

Second Year.
Senior English, Junior Chemistry,

Physics II, and III, Mathematics II. Physics I.

Junior English, Mathematics I,

Mental Philosophy,
Senior Latin, Senior Greek, Senior French, Senior German.

Any one.

Third Year.
$\left.\begin{array}{l}\text { Economics, } \\ \text { Medieval History, }\end{array}\right\}$ Any one.

Workshop I, Drawing I.

Drawing II, III, Descriptive Geometry,

Workshop II, General Engineering I,

Senior Chemistry, Surveying I.
Pass Mineralogy,
Fourth Year.
Politics, Moral Philosophy, Preliminary Honour Latin, Preliminary Honour French, Preliminary Hon'r German, Intermediate Hon'r English, $\langle$

Fifth Year.
Same as third year B.Sc. course.
Sixth Year.
Same as fourth year B.Sc. course.

## ARTICLE IX.-HONOUR COURSES.

1. Students preparing for the position of High School Master are recommended to take one of the courses that qualify for Specialists' Certificates under Departmental Regulations.
2. The degree of M.A. will be conferred on students who take Pass standing in the Pass classes, and first class Honors in the Honor classes, in any one of the following courses.
3. The degree of B.A. will be conferred on candidates who take Pass standing in the Pass classes, and second or third class honors in the Honor classes of any one of the following courses:

## 4.-Course A.-Literature and Philosophy. PASS CLASSES.

A.-I. Junior and Senior Latin.
2. Junior and Senior Greek. (a)
3. Junior and Senior French. Any one.
4. Junior and Senior German.

Three.
B.-I. Junior English.
2. Senior English.
3. Mental or Moral $\left.\begin{array}{l}\text { Philosophy. }\end{array}\right\}$
C.-I. Junior Mathematics.
2. Animal Biology.
3. Botany.
$\}$ One.
D.-I. Junior and Senior Greek.*
2. Junior and Senior French.*
3. Junior and Senior German.*
4. Moral Philosophy.
5. Economics and Politics.
6. Mediæval and English Constitutional History.

Any two.

HONOUR CLASSES.

1. Preliminary and Final Honour Latin.
2. Preliminary and Final Honour Greek.
3. Preliminary and Final Honour French.
4. Preliminary and Final Honour German.
5. Preliminary, Intermediate and Final Honour English.
6. Preliminary and Final Honour History.
7. Preliminary and Final Honour Political Science.
8. Preliminary and Final Honour Mental Philosophy.
9. Preliminary and Final Honour Moral Philosophy.
(a) Students taking Greek will not be required to take the class in C .
*Only for those who have not taken them.
5.-Course B.-Mathematics and Physics.

> PASS CLASSES.

Junior English..
Senior English.
Junior Mathematics.
Senior Mathematics.
Junior Physics.
Senior Physics.
Mental or Moral
Philosophy.
Seven.

Medirval History.
Economics.
Mental or Moral Philosophy.
Junior Chemistry.
Junior Latin.
Senior Latin.
Junior Greek.
Senior Greek.
Junior French.
Senior French.
Junior German.
Senior German.
One of the following Honour Groups:
I. Mathematics-Comprising Honour Mathematics, Preliminary Honour Physics and Practical Astronomy.
2. Physics-Comprising Preliminary and Final Honour Physics, subjects $1,2,3,4,5,6,7,8$ of Honour Mathematics, and Descriptive Astronomy.

$$
\begin{gathered}
\text { 6.-COURSE C.-SCIENCE. } \\
\text { PASS CLASSES. }
\end{gathered}
$$

Junior English.
Senior English Junior Mathematics, Senior Mathematics. Mental Philosophy. Nine. Junior Physics. Senior Physics. Junior Chemistry. Senior Chemistry.

Junior Latin. Senior Latin. Junior Greek. Senior Greek. Junior French. Senior French. Junior German. Senior German. Moral Philosophy.

One of the following Honour Groups:
I. Preliminary and Final Honour Chemistry and Honour Experimental Physics.
2. Preliminary and Final Honour Chemistry, with either Preliminary and Final Honour Botany or Preliminary and Final Honour Animal Biology.
3. Preliminary and Final Honour Chemistry, Preliminary and Final Honour Mineralogy.-Any two.

## Specialists' Courses.

7. By agreement with the Education Department of Ontario, candidates taking an M.A. degree or B.A. with second class honors (sixty-six \%) in any of the following courses and attending not less than two full sessions will receive the nonprofessional qualification of Specialist.
8. The degree of M.A. will be conferred on students who take Pass standing in the Pass classes and first class Honors in the Honor classes in any one of the following courses.
9. The degree of B.A. will be conferred on candidates who take Pass standing in the Pass classes and second or third class Honours in the Honour classes of any one of the following:

## Course I.-Classics. <br> Pass Classes.

> Junior and Senior Latin
> Junior and Senior Greek. Junior and Senior English.
> Mental and Moral Philosophy.
> Junior Mathematics.
> English Constitutional History.
$\left.\begin{array}{l}\text { Junior Physics. } \\ \text { Junior Chemistry. } \\ \text { Pass Animal Biology. }\end{array}\right\}$ Any one.
Honour Classes.
Honour Latin, Preliminary and Final.
Honour Greek, Preliminary and Final.
Preliminary Honour Latin and Greek include the Roman and Grecian History.

Course II.-English and History (Classics Option.)

> Pass Classes.

Junior and Senior Latin
Junior and Senior Greek.
Junior and Senior English.
Mental or Moral Philosophy.
Junior Mathematics.
Medirval and English Constitutional History. Junior Physics.
Junior Chemistry. Any one.
Pass Animal Biology.
Honour Classes.
Honour English, Preliminary, Intermediate and Final. Honour History, Preliminary.
Honour Greek, Preliminary.
Honour Latin, Preliminary.
Course III.-English and History (Moderns Option.) Pass Classes.
Junior and Senior Latin.
Junior and Senior French.
Junior and Senior German.
Junior and Senior English.
Junior Mathematics.
Mediæval and English Constitutional History.
Mental or Moral Philosophy.
Junior Physics.
$\left.\begin{array}{l}\text { Junior Chemistry } \\ \text { Pass Animal Biology. }\end{array}\right\}$ Any one.
Honour Classes.
English, Preliminary, Intermediate and Final Honours.
History, Preliminary Honours.
French, Preliminary Honours.
German, Preliminary Honours.

Course IV.-French and German.
Pass Classes.

Junior and Senior Latin.
Junior and Senior French.
Junior and Senior German.
Junior and Senior English.
Junior Mathematics.
Mediæval and English Constitutional History. Junior Physics.
Junior Chemistry. Any one.
Pass Animal Biology.)

## Honour Classes.

English, Intermediate Honours. French, Preliminary and Final Honours. German, Preliminary and Final Honours.

Course V.-Moderns, (English, French and German), and History.

> Pass Classes.

Junior and Senior Latin.
Junior and Senior German.
Junior and Senior French.
Junior and Senior English.
Junior Mathematics.
Mental or Moral Philosophy.
Mediæval and English Constitutional History (Honour standing required.)
Junior Physics.
Junior Chemistry. Any one.
Pass Animal Biology

## Honour Classes.

Honour English, Preliminary, Intermediate and Final A. Honour German, Preliminary and Intermediate. Honour French, Preliminary and Intermediate.

> Course VI.-Mathematics. Pass Classes.

Junior Latin.
Junior French, German or Greek. Junior and Senior English.
Mental or Moral Philosophy.
Junior and Senior Physics.
Junior and Senior Mathematics.

## Honour Classes.

Preliminary Honour Physics, with Practical Astronomy. Honour Mathematics.

> Course VII.-Mathematics and Physics. Pass Classes.

Junior Latin.
Junior French, German or Greek.
Junior and Senior English.
Mental or Moral Philosophy.
Junior and Senior Physics.
Junior and Senior Mathematics.
Honour Classes.
Preliminary Honour Physics, with Descriptive Astronomy. Final Honour Physics.
Honour Mathematics, No. I, 2, 3, 4, 5, 6, 7, 8.

## Course VIII.-Science.

Pass Classes.
Junior Latin.
Junior French, German or Greek.
Junior and Senior English.
Junior and Senior Mathematics.
Junior and Senior Physics.
Junior and Senior Chemistry.
Pass Botany.
Pass Animal Biology.
Pass Mineralogy.
Pass Geology.
Honour Classes.
Preliminary Honour Chemistry.
Preliminary Honour Botany.
Preliminary Honour Animal Biology.
Together with any one of the following groups:
(a). Final Honour Botany and Final Honour Animal Biology.
(b). Experimental Honour Physics and Final Honour Chemistry.
(c). Final Honour Chemistry and Preliminary and Final Honour Mineralogy.
(d). Preliminary Honour Mineralogy and Preliminary and Final Honour Geology.

## ARTICLE X. SUBJECTS OF STUDY FOR B.A. AND M.A. DEGREES.

LATIN.<br>Professor-William B. Anderson, M.A. (Aberd. Cantab.). Assistant Professor-George W. Mitchell, M.A. Tutors-A. E. Boak, M.A., W.D. Lowe, M.A.

## Preparatory Class.

The course for this class and the books to be used will be prescribed at the beginning of the session.

## Junior Class.

Translation from the books specified below, with questions on grammar and subject matter ; for grammatical study Postgate's New Latin Primer is recommended.

Latin Prose Composition partly based on the books read and on Fletcher and Henderson's Latin Prose Composition.

Roman History, from 289 to 78 B.C. (Shuckburgh's History of Rome for Beginners is recommended).

Roman Antiquities (Wilkins' Primer).
Translation of simple Latin at sight.
Livy, Book XXI (Capes and Melhilish).
Vergil, Aeneid IX (Stephenson or Sidgwick).

## Senior Class.

Translation from the books specified below, with questions on grammar and subject matter; for grammatical study Postgate's New Latin Primer is recommended. Translation at sight, and Prose composition based on the books read and on North and Hillard's Latin Prose Composition.

Roman History from 509 to 23 B.C. (Shuckburgh's smaller History is recommended).

Latin Literature, the Ciceronian and Augustan periods (Mackail).

Cicero, Pro Archia (Reid).
Suetonius, Iulius (Peck).
Vergil, Aeneid VI (Sidgwick, or Page's larger edition of Books I-VI).

## Honours.

Candidates for Preliminary and Final Honours should note that much importance is attached to Composition and Translation at sight. The Roman History required from candidates for

Specialist certificates is included in the Preliminary Honour examination, and must be taken. The course embraces the History and Literature of Rome to the death of Marcus Aurelius. Lectures are given on this and on such subjects as Syntax, the History of the Language, Textual Criticism, and Roman Philosophy. The Histories of Rome by Wells, How and Leigh, and Pelham, Mackail's Latin Literature and Tyrrell's Latin Poetry will be found useful.

The Final Honours course will include Roman Epigraphy and the study of a limited period of History with original authorities; students taking this course should provide themselves with Rushforth's Latin Historical Inscriptions and with Cagnat's Cours d' Epigraphie latine or Egbert's Introduction to the Study of Latin Inscriptions.

Latin Works Prescribed.
(Stress is laid on the literary qualities of the books, on important textual questions, and on points of interpretation, history or archæology arising from the subject matter).

## Preliminary Section.

Lucretius III (Duff).
Cicero, Philippics V, VI (Brighouse), Cicero in his Letters, ed. by Tyrrell (Macmillan), I-XL.
Vergil, Georgic II, Aeneid III, IV, VI, IX. Students should provide themselves with complete editions (Page's or Sidgwick's) of the Eclogues, Georgics and Aeneid.
Horace, Odes III, Epistles II, including Ars Poetica (Page, Palmer and Wilkins in one vol., Macmillan).
Lucan V (Teubner text).
Tacitus, Agricola.

## Final.

(To be taken at least one year later than the Preliminary Section).

Plautus, Rudens (Sonnenschein, smaller edition).
Lucretius III (Duff).
Cicero, Pro Sestio (Holden), Brutus (Kellogg).
Livy IX.
Vergil, Georgics I, II ; Aeneid III, IV, V, VI, IX.
Horace, Epistles, including Ars Poetica.
Lucan I, V.
Tacitus, Histories I (Davies), Dialogus de Oratoribus (Bennett or Peterson).
Crowell's Selections from the Latin Poets; extracts from Catullus.

General Notice to Latin Students:
Members of the Latin classes should provide themselves with a Classical Dictionary (Smith's Smaller Classical Dictionary, or Harper's or Seyffert's Classical Dictionary), and also with a Classical Atlas (Murray's is recommended) or at least with a map of ancient Italy (in Murray's series of Handy Classical Maps). In Gow's Companion to School Classics (Macmillan) will be found an excellent summary of many things which the student of Latin ought to know.

## GREEK.

Professor-T. Callander, M.A. (Aberd. Oxon.).
Assistant Professor-G. W. Mitchell, M.A.
Tutor-J. P. Quigley, M.A.

> Junior Class.

Greek Grammar (Goodwin).
Translation from authors not specified.
Plato Selections (Sidgwick).
Homer, Odyssey, XI, XII. (Merry).
Lucian, Vera Historia II. (Jerram).

## Senior Year.

Thucydides I (Macmillan).
Homer, Odyssey IX, XII (Merry).
The Epistle to the Hebrews.
Greek Grammar and Composition.
Translation from authors not specified.
For general reading:
Jebb, Primer of Greek Literature and Introduction to Homer. Maisch, Greek Antiquities (Temple Primers).
Bury, School History of Greece.

## Honours.

Candidates for Preliminary and Final Honours in Greek should note that special stress is laid on Composition and Unseen Translation. Passages will also be set for translation from the books specified below. The Greek History required from candidates for Specialist Certificates is included in the Preliminary Honour Examinations and must also be taken.

Books recommended:
Murray, Greek Literature.
Goodwin, Greek Grammar.
Holm, History of Greece.
Bury, History of Greece.
Hogarth, Philip and Alexander.

Schuchhardt, Schliemann's Excavations.
Jebb, Infuence of Classical Greek Poetry.
Butcher, Some Aspects of the Greek Genius. Harvard Lectures on Greek Subjects.
Gilbert, Greek Constitutional Antiquities.
Instead of the editions mentioned below students may find it convenient to use the Teubner series.

## Preliminary.

(The examination in this class must be taken at least one year before the final examination).

Thucydides VII (Marchant, Macmillan).
Plutarch, Pericles.
Homer, Odyssey I-XII (Merry).
Euripides, Bacchae (Tyrrell, Macmillan).
Sophocles Oedipus Tyrannus (Jebb).
Aristophanes, Birds (Merry).
Greek Grammar and Composition.
Final.
Herodotus I, II.
Thucydides I, II.
Demosthenes, De Corona (Goodwin).
Plato, Republic V, VI, VII (Adam).
Aristotle, Ethics I.
Plutarch, Themistocles, Pericles.
Homer, Odyssey I-XII, Iliad I and VI.
Aeschylus, Agamemnon (Sidgwick). Prometheus (Sikes \& Willson).
Sophocles, Oedipus Coloneus, Antigone (Jebb).
Euripides, Bacchae (Tyrrell).
Aristophanes, Knights (Merry).
Pindar, Olympians (Gildersleeve).
Theocritus, Selections.

## GERMAN LANGUAGE AND LITERATURE.

Professor-J. Macgillivray, Ph.D. (Leipsic).
Assistant Professor-E. W. Patchett, B.A.
Tutor-A. W. Baird, M.A.
Junior Class.
The following works are to be translated and studied:
Baumbach, Neue Märchen (Hans Taps; Die Königstocher, die nicht weinen konnte; Entenschnabel; Der Esel und der Kritiker; Eine Weinachtsgeschichte; Der Besuch im Himmel).
Möbius, Götter- und Heldensagen I.

Paul Heyse, Vetter Gabriel.
Benedix, Eigensinn (Heath \& Co.).
Freytag, Die Journalisten (Ginn \& Co.).
Günther, Deutsche Kulturgeschichte, I-40 (Sammlung Göschen)
Grammar (Duerr), Essentials of German Grammar.
Writing German from Dictation, and Sight Translation.
Oral and Written Composition, based on the above works.

## Senior Class.

The following works are to be studied:
Möbius, Gotter- und Heldensagen I, II, III.
Baumbach, Neue Märchen.
Paul Heyse, Der Verlorene Sohn.
Theodor Storm, Der Schimmelreiter (Ginn \& Co.).
H. von Kleist, Michael Kohlhaas.

Uhland, Balladen (Balladenbuch, Macmillan \& Co.).
Goethe, Balladen (Macmillan \& Co.).
Günther, Deutsche Kulturgeschichte, I-89.
Achelis, Sociologie, I-49 (Sammlung Göschen).
Translation from authors not specified. Writing German from Dictation.
Oral and Written Composition and Translation into German, based on the above works.

Honours.
The examination in Preliminary Honours must be passed at least one year before the Intermediate, or the Intermediate and Final Examination. Preliminary Honours count as a pass class.

## Preliminary.

Baumbach, Märchen.
Heyse, Novellen, 8ter Band V. (Vetter Gabriel, Der verlorene Sohn, Am Totensee, Annina, Ein Abenteuer, Auf der Alm).
Frenssen, Jörn Ul, I-VIII.
Schiller, Maria Stuart.
Goethe, Faust I, Gedichte (Holt \& Co., Göbel).
Lessing, Nathan der Weise.
Günther, Deutsche Kulturgeschichte (Sammlung Göschen). Achelis, Sociologie, I-85 (Sammlung Göschen).
Koch, Geschichte der deutschen Literatur, III (Sammlung Göschen).
Deutsche Grammatik und kurze Geschichte der deutschen Sprache (Lyon, in Sammlung Göschen).
Writing German from Dictation.
Oral and Written Composition based on the above works.

## Intermediate.

Baumbach, Neue Märchen.
Heyse, Novellen (8ter B.V.).
Frenssen, Jörn Uhl.
Schiller, Maria Stuart, Wilhelm Tell, Balladen (Balladenbuch).
Goethe, Faust I, Iphigenie, Gedichte (Holt \& Co.).
Lessing, Emilia Galotti, Nathan der Weise.
Scheffel, Ekkehard.
Felix Dahn, Gelimer.
Günther, Deutsche Kulturgeschichte.
Achelis, Sociologie.
Elsenhans, Psychologie and Logik zur Einführung in die Philosophie (Sammlung Göschen).
Braune, Gothische Grammatik und Ulfilas-Matthäus 5.
Braune, Altochdeutches Lesebuch-Muspili.
Clother, Das Nibelungenlied in Auswahl, I-V (Sammlung Göschen).
Lyon, Deutsche Grammatik und Kurze Geschichte der Deutschen Sprache (Sammlung Göschen).
Koch, Geschichte der Deutschen Literatur.
Oral and Written Composition and Translation into German, based on the above works.

## Final.

Baumbach, Neue Märchen, Erzählungen und Märchen.
Heyse, Novellen (8ter B.V.).
Frenssen, Jörn Uhl.
Felix Dahn, Gelimer.
Freytag, Soll and Haben.
Scheffel, Ekkehard, Der Trompeter von Säkkingen.
Goethe, Faust, Egmont, Torquato Tasso, Iphigenie, Gedichte (Göbel).
Schiller, Don Carlos, Wallenstein, Maria Stuart, Die Jungfrau von Orleans, Wilhelm Tell.
Lessing, Minna von Barnhelm, Emilia Galotti, Nathan der Weise.
Behagel, Die Deutscht Sprache.
Günther, Deutsche, Kulturgeschichte.
Achelis, Sociologie.
Braune, Gotische, Grammatik und Ulfilas-Matthaüs 5, 6.
Braune, Althochdeutsches Lesebuch-Musspili, D a s Ludwigslied, Otfritd's Evangelienbuch.
Clother, Das Nibelungenlied in Auswahl, I-V.
Koch, Geschichte der Deutschen Litteratur.
Kluge, Geschichte der Deutschen Litteratur.
Oral and Written Composition and Translation into Gtrman based on the above works.

Note.-No candidate can pass any examination in German, Pass or Honour, who has not made the required standing in each of the essential parts of the examination, i.e., in Pass: Translation into English, Translation into German and Composition, Literature; Pronunciation and Dictation; in Honours, as in Pass, with the addition of Philology and Orals.

## ROMANCE LANGUAGES AND LITERATURE.

Professor-P. G. C. Campbell, M.A. (Oxon.).
Assistant Professor-E. W. Patchett, B.A. (Cambridge).
Tutors-W. M. Hay, B.A., Miss E. Malone, M.A.

## French.

Note for all classes.-No good work in French can be done without a large dictionary. Small pocket editions are worse than useless.

> Junior Class.

Works to be studied:-
The Subjects for Senior Matriculation, viz.:-
Lamennais, Paroles d'un croyant, Chaps. VII and XVII; Perrault, le Maître Chat ou le Chat Botté; Dumas, Un nez gelé, and la Pipe de Jean Bart; Alphonse Daudet, la Dernière Classe, and la Chèvre de M. Seguin; Legouvé, la Patte de Dindon; Pouvillon, Hortibus; Loti, Chagrin d'un vieux forçat; Molière, L'Avare, Acte III, sc. 5 (Est-ce à votre cocher....sous la mienne) ; Victor Hugo, Waterloo, Chap. IX; Rouget De L'Isle, la Marseillaise; Arnault, la Feuille;; Chateaubriand, l'Exilé; Théophile Gautier, la Chimère; Victor Hugo, Extase; Lamartine, l'Automne; De Musset, Tristesse; Sully Prudhomme, le Vase brisé; La Fontaine, le Chêne et le Roseau.
N.B.-These pieces are collected at the end of "The High School French Grammar."

Labiche-Le Voyage de M. Perrichon (Heath \& Co.).
Meilhac \& Halévy-l'Eté de la Saint-Martin.
Anon-La Main Malheureuse (Heath \& Co.).
G. Sand-La Mare au Diable (Holt \& Co.).

Contes et Nouvelles (Ed. J. Lazarre-Hachette \& Co.).
Grammar treated by the Inductive Method.
Writing French from Dictation.
Translation into French and Essays based on the works read. Note.-Extra-mural students should procure Grandgent's. "French Composition" (Heath \& Co.).

Note.-Elementary classes are held twice a week for those who have done but little French, fee $\$ 3$.

## Senior Class.

Cameron-Tales of France (American Book Co.).
Balzac-Cinq Scènes de la Comédie Humaine (Heath \& Co.). Victor Hugo-La Chute (American Book Co.).

Mérimée-Colomba (Holt \& Co.).
Foncin-Le Pays de France (Armand Colin).
Augier-Le Gendre de M. Poirier.
Rosey-French Literature (Blackie \& Sons).
A thorough study of Grammar and Syntax.
Unseen Translation.
Translation into French Prose. Text book, "French Prose Composition for Middle Forms"-Duhamel \& Minssen (Rivingtons).
Writing French from Dictation.
Essays-Nov. 30th, The contrasts between the English and the French languages.

Feb. 18th, to be written in French, The possibility of Universal Arbitration.
N.B.-All students (intra- and extra-mural) in order to be admitted to examination must write both the prescribed essays and at least 50 per cent. of the Proses set.
N.B.-For those who have taken the Junior French in the combined B.A. and M.D. course (pages 64, 152) the work in the next three years for examination will be:-

II Year-Le Gendre de M. Poirier. Herdler's "Scientific French Reader," pp. i-86 (Ginn \& Co.). Unseen Translation of a scientific character.
III Year-Herdler's "Scientific French Reader." Unseen Translation of a scientific character.
IV Year-"Lectures Scientifiques" (Rivingtons). Unseen Translation of a scientific character.

## Honours.

Students are strongly advised to study the Examination Papers of the last five years, as affording some guide to their own studies.

In Literature the following subjects will be specially studied in class: Early French Literature in connection with the society of the times; The Theory and Rules of Tragedy and Comedy; Corneille, Racine, Molière, Voltaire.

## Preliminary.

(The examination in this class must be attempted at least one year before the intermediate or final examination. It may also be taken as a pass class).

TEXTS:-
*Montaigne-Essais. Book I, chapters xviii-xxvii.
*Corneille-Horace.
Racine-Andromaque.
Molière-Le Misanthrope.
*De Musset-Trois Comédies (Heath \& Co.), viz.:-
Fantasio. On ne badine pas avec l'amour. Il faut qu'une porte soit ouverte ou fermée.
Victor Hugo-*Hernani.
*Balzac-Eugénie Grandet (Holt \& Co.).
*Loti-Pêcheur d'Islande.
Daudet-Tartarin sur les Alpes. Unseen Translation. Writing from dictation.
Translation into French Prose. Text Book: Duhamel"Advanced French Prose Composition" (Rivingtons).

The History of French Literature with special reference to the 17 th, 18 th and igth centuries.

Text book: Petit de Julleville-Leçons de Littérature Française.
Consult: The various studies of Sainte Beuve. Brunetière-Manuel de l'Histoire de la Littérature Française.
The Theory of Phonetic Change and History of the French Language-a course of 24 lectures-for intramural students.
Composition in French-Subjects for 1906-1907:-
Nov. 17th, A Study [not an epitome] of "Andromaque."
Dec. I3th, The treatment of Parental Love in the French Drama.
Feb. Ioth, The part now being played by the British Empire in the advance of Humanity.

## Intermediate.

(For those taking Specialist Course V).
Translation from Unseen authors.
Translation into French Prose.
Composition in French.
Texts set (Unabridged Editions) for translation and study :-
Cent. XVI.-*Montaigne-Essais. Book I, chapters xviii-xxvii.
*Corneille-Horace.
Molière-Le Misanthrope.
Racine-Andromaque.
*Boileau-L'Art Poétique, Canto I.
Descartes-Discours de la Méthode (Parts I-IV, VI).

Cent. XVIII.-Beaumarchais-Le Barbier de Séville. Chateaubriand-Atala, René.
*To be specially studied in class.

Cent. XIX.-Victor Hugo-*Hernani, Cromwell [Preface].
*De Tocqueville-L'Ancien Régime.
*Balzac-Eugénie Grandet.
*Loti-Pêcheur d'Islande.
*De Musset-Fantasio. On ne badine pas avec l'amour. Il faut qu'une porte soit ouverte ou fernée.

Renan-Souvenirs d'enfance et de jeunesse (Heath
$\&$ Co.).
The Literary History of France, with special reference to the political and social history.

The Principles, in outline, of Literary Criticism applied to French Literature.

Text-book:-
Aristotle's Poetics (edited by Butcher).-The Essays.

## Final.

In addition to the work set for Intermediate Honours the following work is prescribed:

Texts-Molière-Les Précieuses Ridicules, L'Avare. Voltair--Mérope.

- V. Hugo-Les Orientales I-X. Quatre-Vingt-Trieze. Gautier-Jettatura. Daudet-Tartarin sur les Alpes.
Philology-i. The General Theory of Phonetic Change.

2. The History and Development of the French Language.
Introductory Text-book-Spiers-"Short Historical French Grammar" (Simpkin Marshall).
3. The Grammar of Old French.
4. The Study of Old French Texts.
*Text-book-Clédat-Chrestomathie du Moyen-Age, [St.
Thomas de Cantorbéry, Chanson de Roland, Berthe aux grands pieds, Le Miracle de Berthe].
Consult for reference:-
Nyrop-"Grammaire Historique de la Langue Française."
Gröber-"Grundriss von Romanischer Philologie."
Meyer Lübke-"Grammaire des Langues Romanes."
Clédat-"Nouvelle Grammaire Historique."
Essays for 1906-7 for Intermediate and Final Honour Students: Nov. 3 rd-The Social and Political Interest of "Le Barbier de Seville."
Dec. Ist-Dramatic Irony and its place in the French drama.
Jan. 28th-Boileau-his theories and their influence.
Mar. ist-Foreign Influences on French Literature.
These essays to be written in French.
*To be specially studied in class.

Italian.
(Italian is not obligatory for any course save for Ph.D. work).
Voluntary classes are held. No fee. Tickets to be obtained from the Registrar.
First Year-Grammar-(Grandgent).
Unseen Translation.
De Amicis-Il più bel Giorno della Vita.
Dante-Inferno I-II.
Second Year-Translation into Italian (Grandgent's Italian Composition).
History of Italian Literature (Snell's Primer of Italian Literature).
Dante-Inferno I-X.
Tasso-La Jerusalemme Liberata I-II. Del Testa-Le Conscienze Elastiche.
Carcano-La Nunziata. Unseen Translation.

## Spanish.

Valera-El Pájaro Verde (Ginn \& Co.).
Moratin-El si de las Ninas (Ginn \& Co.).
Alarcón-El Capitán Veneno (Heath \& Co.).
Calderon-La Vida es Sueno (Heath \& Co.).
Cervantes-Don Quixote (Heath \& Co.).
Edgren's Grammar (Heath \& Co.).
Ford's Composition (Heath \& Co.).
Writing Spanish from Dictation.
Outline of the History of the Literature.
Note.-Extra-mural students should obtain competent teachers for oral instructions as no candidate will be accepted whofails in the oral examination. Pass candidates may take the oral examination at outside centres, provided an examiner approved by the Senate be obtained; but Intermediate and Final Honour candidates must pass their oral examination at the University.

## ENGLISH LANGUAGE AND LITERATURE.

Professor-James Cappon, M.A. Assistant Professor-John Marshall, M.A. Fellow-H. A. Connolly, M.A.
Tutors-G. A. Brown; G. A. King.

> Junior Class.
I. Practical course in Rhetoric and Composition.
(a) General Theory and illustrations.
(b) Exercises on the above, with essays.
2. Study of Prose Authors in selected passages: Development of English prose as illustrated by Bacon, Addison, Johnson, Macaulay, Ruskin, Carlyle, Huxley, Arnold, and others.
Text-book for this course: Model English Prose (Macmillan \& Co.).
3. A detailed study in class of the following:

Chaucer, Prologue to Canterbury Tales. (The descriptions of the Knight, Squire, Prioress, Monk, Friar, Student, Merchant, Franklin, Doctor, Shipman, Parson).
Shakespeare, Julius Cæsar.
Longfellow, Prelude, Nuremberg, The Belfry of Bruges, The Skeleton in Armour, Amalfi, The Village Blacksmith, The Day is Done, The Secret of the Sea.
Tennyson, The Palace of Art, The Lady of Shalott, "Love Thou Thy Land," The Lord of Burleigh.
Wordsworth, Lucy Gray, Fidelity, The Two Voices, The Happy Warrior.

## Senior Class.

## I.

(a) Shakespeare, Richard III, As You Like It. Milton, Paradise Lost, Book I.
(b) Dryden, Epistle to Mr. Congreve, the Descriptions of Achitophel and Zimri in Absolom and Achitophel, Alexander's Feast.
Pope, Epistle to Arbuthnot (Satires).
Johnson, Vanity of Human Wishes.
Gray, Elegy, Ode on Eton College.
Collins, Ode to Liberty, Ode to the Passions.
Goldsmith, The Deserted Village.
Burns, The Cotter's Saturday Night, A Bard's Epitaph To a Mouse, Whistle and I'll Come to ye my lad, Farewell to Nancy; Tam Glen.
(Read Gosse, Eighteenth Century Literature, chaps. I, III, IV, and IX, X, XI).
(c) Wordsworth, Ruth, Song at the Feast of Brougham Castle, Lines written near Tintern Abbey.
Keats, Ode to the Nightingale, On First Looking into Chapman's Homer.
Browning, A Grammarian's Funeral, Abt Vogler, A Toccata of Galuppi's.
(d) Edward Gibbon, Description of Byzantium (Baldwin's Specimens of Prose Description. Henry Holt \& Co.).
Macaulay, Boswell's Life of Johnson.
Carlyle, Essay on Burns.
Charles Lamb, The South-Sea House (Baldwin's Specimens of Prose Description).

Ruskin, Geneva (Baldwin's Specimens of Prose Description).
Adam Smith The Division of Labour (Lamont's Specimens of Exposition. Henry Holt \& Co.).
Matthew Arnold, Wordsworth (Lamont's Specimens of Exposition).

## II.

Development of Poetry and Poetic Forms.
(a) Development of Poetry from Chaucer to Shakespeare.
(b) Characteristics of Epic, Lyric and Dramatic Poetry.
(c) The Development of the Rhymed Couplet.
(d) The Development of the Ballad Form.
(e) The Development of Blank Verse.
( $f$ ) History of the Sonnet.
Extra-mural students may consult Corson's Primer of English Verse and Gummere's Handbook of Poetics).

## III.

(a) Lectures on the History of the English Language.
(b) Specimens of Early English, Robert of Gloucester (Morris \& Skeat, Part II).
(c) For extra-mural students: O. F. Emerson's History of the English Language (Macmillan \& Co.), chapters III, IV, V, VII, IX, X, XIII, XIV, XV, XVII, XVIII, XIX, XX, XXI, XXII.

## Honours.

## Preliminary.

I. Anglo-Saxon:-(Sweet's Anglo-Saxon Reader).

Alfred's Preface to the Cura Pastoralis.
Alfred's Translation of Boethius.
Alfred's Translation of Beda (Account of the Poet Caedmon).
Aelfric's Assumption of St. John.
Aelfric's Life of King Oswald.
Charters (Eadgifu).
Extract from the Boewulf, lines I-I50.
The Battle of Maldon.
2. Skeat, Principles of English Etymology (Chaps. VII, X, XI, XVIII, XIX, XXI).
For extra-mural students: O. F. Emerson's History of the English Language (Macmillan \& Co.).
3. Ten Brink, Early English Literature, Book I.

Morris \& Skeat, Specimens of Early English, Extracts I and
VII.

## Intermediate.

Cowper, Table Talk, Progress of Error, Task, Book I.
Wordsworth, The Prelude, Books I, II, III, IV; the following poems from "Lyrical Ballads": The Thorn, Simon Lee, The Last of the Flock, The Mad Mother, The Idiot Boy, Expostulation and Reply, The Tables Turned, The Complaint of a Forsaken Indian Woman, Lines Written near Tintern Abbey, Hart Leap Well, There Was a Boy, The Brothers, Lucy Gray, Ruth, Lines Written upon a Tablet, The Two April Mornings, Nutting, Three Years She Grew, The Old Cumberland Beggar, Michael; the poems published as "Memorials of a Tour in Scotland (i803)"; the poems "dedicated to National Independence and Liberty," Yew Trees, She was a Phantom of Delight, I Wandered Lonely as a Cloud, Song at the Feast of Brougham Castle, Laodamia, Dion, Peter Bell, Fidelity, Ode to Duty, Character of the Happy Warrior, Ode on Immortality, Excursion Book I.
Keats, Ode on a Grecian Urn, Ode to a Nightingale, Isabella, Lamia, Byron, Bride of Abydos, Childe Harold, Canto I-III. Tennyson, Ulysses, Morte d'Arthur.
Clough, The Bothie, Through a Glass Darkly, Ah! Yet Consider it again, Qua Cursum Ventus.
Browning, (a) The Grammarian's Funeral, Andrea Del Sarto, Fra Lippo Lippi, Pictor Ignotus, The Bishop Orders His Tomb, Bishop Blougram, How it strikes a Contemporary, Epistle of Karshish, Cleon; (b) Abt Vogler, Rabbi Ban Ezra, A Toccata of Galuppi's, The Laboratory, The Glove, Dis Aliter Visum, Youth and Art, Waring, The Englishman in Italy, Old Pictures, in Florence.
Arnold, on Translating Homer, Essays on Wordsworth and Byron, Essay on Poetry, (Essays in Criticism, Second Series), Culture and ${ }^{\circ}$ Anarchy, Chap. III.
Carlyle, Sartor Resartus, Past and Present (Chapters: Phenomena, Mammonism, Dilettantism, Labour, Reward, Democracy).
Ruskin, On Geneva.
Gibbon's Rome, Chap. XXXV.
Adam Smith, Wealth of Nations, Bk. I, Chap. I.
J. H. Newman, Ancient Athens.

Candidates are expected to have a critical understanding of the development of poetry from Cowper to Tennyson.

## Final.

(Every candidate for Final Honours is subject to re-examination on the Intermediate texts).
A.

Coleridge, Monody on Chatterton, France, An Ode, To William Wordsworth, Christabel, Dejection An Ode, Hymn Before Sunrise in the Vale of Chamouni.
Shelley, Alastor, Hymn of Pan, Adonais, Stanzas written near Naples, Hymn to Intellectual Beauty, Prometheus Unbound.
Ruskin, Modern Painters, Vol. III, Part IV, Chaps. IV to XIII, (of the False Ideal, of the True Ideal, of Finish, of the Pathetic Fallacy, of Classical Landscape) ; The Stones of Venice (On the Nature of Gothic).
Carlyle, Life and Letters of Cromwell, [Introduction, Letters CXXXIX and CXL, containing accounts of the Battle of Dunbar (Part VI); Letter CLXXXVII, The Dismissal of the Rump (Part VII)].
Scott, Old Mortality.
Emerson, The Method of Nature, Literary Ethics (Essays and Orations).
Arnold, Essays in Criticism (First Series), On the Study of Celtic Literature, Sections 4, 5, 6; Culture and Anarchy, Chaps. II and III.
De Quincey, On Style (Historical and Critical Essays).
Tennyson, In Memoriam.
Browning, Strafford.
Clough, Religious Poems (except fragments of the Mystery), Amours de Voyage.
In addition the candidate is expected to understand the value of the following works, both as art and as interpretation of life, and to answer questions of a general nature on their style and methods:

Scott, The Antiquary, Redgauntlet.
Thackeray, Vanity Fair.
Hawthorne, The House of the Seven Gables.
Carlyle, Life of John Sterling.
Emerson, The American Scholar.
Candidates are expected to have a critical understanding of the development of thought, as expressed in literature, during the 19th century.

## B

## ROMANCE PHILOLOGY.

I. The poetry of Chaucer is the centre of studies in this course.
2. Origin and development of the octosyllabic couplet; origin and development of decasyllabic verse.
3. The Compleynte unto Pite, The Book of the Duchess, House of Fame, and the Legend of Dido (Legend of Good Women). Use Skeat's edition of Chaucer's Minor Poems and The Legend of Good Women.
4. Development of the sonnet-form and its use by Petrarch, Spenser, Shakespeare, Milton and Wordsworth.
5. The structure of the stanza, in Provencal and Italian poetry, and in Chaucer.
Consult 1 en Brink, Chaucer, Studien zur Geschichte seiner Entwicklung. Chaucer's Sprache and Verskunst.

Sandras, Etude sur Chaucer.
Gaston Paris, La Littérature Francaise, Au Moyen Age, Section II, Chap V (Le Roman de la Rose), Section III, Chaps. I and II.

Schipper, Altenglische Metrik (Englische Metrik, Erster Theil.

Grober, Romanische philologie (Romanische Verslehre von E. Stengel).

Bartsch, Grundriss zur Geschichte der provenzalischen Literatur. Sections $1,2,3,4,5,13,14,18,21,22,23,24,25,26,27$, 28, 30, 44, 48, 49, 50, 56.

Dante, De Vulgari Eloquio. Lib. 2.

## ELOCUTION.

I. Elements of Vocal Training. Correct method of breathing. Training of the natural use of the voice. Faults of the voice, studied and corrected.
2. Principles of Vocal Training. Study of the vocal instruments and their natural use. Science of voice production.

## II. Phonology.

I. Vowels. Principles of vowel formation. Distinction between vowels and articulations (Consonants).
2. Articulation. Study of the elements of speech. Development of the organs of articulation. Correction of common faults.
3. Pronunciation. Training of the ear. Vocal quantity.
Vocal Expression.

1. Elementary principles of Vocal Expression. Principles of inflection. Modulation. Emphasis. Verbal Grouping. Pausing. Expressive Reading.

## IV. Gesture.

1. Elementary Gesture. Nature and kinds of action.
2. Manifesting Gesture. Study and development of the action of each agent of the body and expression.
3. Representative Expression.

Note on Gesture. - The training outlined on Gesture is intended to dignify the study of it, by taking it out of the realm of studied artificially, and by showing it to be a vital, organic part of the oral interpretation of literature and of public speaking This training consists of Physical exercises for which special classes will be arranged.

Note-Individual 'Drill.-Students will be shown and helped personally in the particular work of the course, Two and a half hours each day will be devoted to individual drill.

## V. Advanced Work.

Principles of vocal expression. Assimilation and dramatic instinct. Development of the imagination. Rhythm and melody in speech. Tone-color and harmony. Problems in vocal expression. Study of elementary psychic action and the practice of short extracts as the means of studying and expressing thought and feeling. Extemporaneous speaking.

Students passing this course will be allowed 5 marks on either the Junior or Senior English examination. A fee of \$3 will be charged.

## HISTORY.

Professor-Rev. Geo. D. Ferguson, B.A.
Tutor-C. D. Allin, M.A., LL.B.
English Constitutional History.
Text-books:-Hallam's Middle Ages, Chaps. VIII and IX. Green's Larger History of the English People. Bourinot's Constitution of Canada. Bryce's American Commonwealth, Vol. I.
Lectures on:
The development of representative government.
The British Constitution.
The Constitution of the United States.
The Canadian Constitution.
Students are required to write prescribed essays.

> For Extra-Mural Students.

Essay: The influence of the Norman Conquest on the English Constitution, Oct. 30.

Stubbs' Constitutional Hist. of England, Vol I.
Freeman's Norman Conquest, Vol. IV.
Freeman's William Rufus, Vol. I.
Essay: The Barons War and the Parliament of Simon de Montfort, Nov. 20th.

Pauli's Simon de Montfort.
Stubbs' Constitutional History of England, Vol. II.
Balaauw's War of the Barons.
Essay: The Political State of England at the Accession of the Tudors. Dec. 18th.

Bacon's History of the reign of Henry VII.
The Cambridge Modern History, Vol. I.
Social England by Trail, Vol. II.
Essay: The Convention Parliament at the beginning of the reign of Charles II. January I8th.

Ranke's History of England in the XVII century, Vol. III and Vol. IV.

Hallam's Constitutional History of England, Chap. XI.
Guizot's Life of General Monk.
Monk, by Julian Corbell (English Men of Action Series).
Essay: England's part in the War of the Spanish Succession. February 16th.

Stanhope's History of Queen Anne's reign.
Hill Burton's History of Queen Anne's reign.
Michelet's Histoire de France, Vol. XVI.
Mignet's Essais de l'introduction de la Succession d'Espagne.
Essay: The Whigs under Walpole. March I5th.
Lecky's England in the XVIII century.
Morley's Life of Walpole (Statesmen Series).
Mediaeval History.
Text-books: Ferguson's Lectures on the History of the Middle Ages. Myers' The Modern Age.

## Lectures:

On the civil and religious wars in the 16 th and 17 th centuries.
The Regencies and Louis XIV.
The decline of the French Monarchy in the 18th Century. The Intellectual Movement. The French Revolution.
The Congress of Vienna, and the Hundred days.

> For Extra-Mural Students.

Essay: Charlemagne and his Judicial System. Oct. 22nd.
Mombut's Charles the Great.
Einhard's Life of Charlemagne, translated by Turner.
Guizot's Civilization in France.
Ferguson's Lectures on the Middle Ages, Lectures XI and XII.

Essay: The earlier advance of the French Monarchy to Absolutism, especially under Phillip le Bel. November I5th.

Guizot's Civilization in France.

Guizot's History of France.
Ferguson's Lectures on the Middle Ages, Lectures XXIII to XXV.

Essay: France under Richelieu and Mazarin.
Guizot's History of France.
Perkins' France under Richelieu and Mazarin.
Richelieu, by Lodge (Foreign Statesmen Series).
Mazarin (Foreign Statesmen Series).
Essay: Frederick the Great and the Seven Years' War. January 15th.

Carlyle's Life of Frederick the Great.
Longman's Frederick the Great and the Seven Years' War (Epoch of Modern History Series).
Bright's Maria Theresa (Foreign Statesmen Series).
Hassal's Balance of Power, 1715-1789 (Periods of European History).
Macaulay's Essay on Frederick the Great.
Essay: Mirabeau and his part in the French Revolution, February 13.
Le Mirabeau par Mons Lomenie.
Carlyle's French Revolution.
Willert's Mirabeau (Foreign Statesmen Series).
Thier's, History of the French Revolution.
Taine's, The French Revolution.
Essay: Ideas bequeathed by the French Revolution to the XIX century. March ioth.

Lebon and Pelet, France as it is, translated by Mrs. W. M. Arnold.
Hanotaux, Contemporary France, translated by I. C. Tarver. Bodley's France.

## Honours.

## Preliminary.

Text-books: Stubbs' Constitutional History of England and Select Charters.
Guizot's Representative Government, Part I, Lectures 6, 7, 8, Part II, Lecture 10.
Rousseau's Social Contract.
Mills' Representative Government.
For Extra-Mural Students.
Essay: The Manorial Courts especially in their relation to the Hundred and County Courts. November 14th.

Stubbs' Constitutional History of England, Vol. I.
The Manorial Courts (Selden Series), Vol. II.
Essay: The Loss of Normandy and Anjou and its results on England, December 18th.

Stubbs' Constitutional History of England, Vol. II.
Freeman's Norman Conquest, Vols. IV and V.

Essay: The growth of the Constitution under the Lancastrian Kings. January 23rd.

Stubbs' Constitutional History of England, Vol. III.
Sir J. Ramsay's History of England under York and Lancaster.
Essay: The Confiscation of the Monasteries, considered especially in its political results. February 22nd.
Brewer' Reign of Henry VIII,
Ranke's History of England in the XVII century, Vol. IV. Strypes' Annals of the Reformation.
Essay: The Grand Remonstrance, a Critique. March 20th. Forster's The Grand Remonstrance.
Gardiner's History of England, Vol. III. and IV.

## Final.

Text-books: Hallam's Constitutional History of England. May's Constitutional History.
Bryce's American Commonwealth. Bagehot's English Constitution.
Students in Final Honours are required to write a Thesis on one of the subjects given below. The writer of the Thesis must show that he has consulted original authorities. The subject selected should be submitted to the Professor as early as possible. The Thesis is to be given in by March Ist.

## Subjects For Thesis.

I. A comparison of the Teutonic codes, with Roman Jurisprudence as exemplified in the Institutes of Justinian and the Theodosian code.
Corpus Juris Germanici edit Fred Walter.
Pardessus, La Loi Salique.
Waitz's Das Alte Recht der Salischen Franken.
The Anglo-Saxon Laws.
Institutes of Justinian by Abby and Walker. Codex Theodosianus.
II. A review of the Year Books of Edward III. Roll Series.
III. The Peasant rising of I38r.

Reville and Petit-Dutailles. Le Soulévêment des Travailleurs. d'Angleterre en 138 r .
England in the Age of Wicliffe by G. M. Trevelyan.
IV. The Administration of Justice under the Normans.

Stubbs' Constitutional History of England, Vol. I.
Freeman's Norman Conquest.
Historia Normaniae de Odericus Vitalis.
Coutumiers de Normandie par Mons Tardif.
V. A review of the Thirteenth Century.

The Chronicles of Mathew Paris, Vols. 4, 5, 6. Roll Series.
Social England. Vol. I.
Stein's Das Bildungwesen des Mittelaters.
Rossiere's Hist. de la Societé au Moyen Age.

## MENTAL AND MORAL PHILOSOPHY.

"The John and Ella G. Charlton Professor of Moral Phil-osophy"-John Watson, M.A., LL.D.

Professor of Mental Philosophy-S. W. Dyde, D.Sc., LL.D.
Fellow in Moral Philosophy-L. M. McDougall, M.A.
Fellow in Mental Philosophy-J. C. McConachie, M.A.
Tutors in Pedagogy-J. L. Nicol, and Eliz. M. McNab, M.A.

## Mental Philosophy-Professor Dyde.

This class meets Monday, Wednesday and Friday at 9 a.m. and is divided into two parts (a) The study of Systematic Philosophy, and (b) The study of a special period of Philosophy.
(a) Lectures on the method of Philosophy; a brief outline of Metaphysics, Ethics and Philosophy of Religion.
Books recommended to be read:
Mackenzie's Outline of Metaphysics and Manual of Ethics. Bosanquet's Psychology of the Moral Self. Palmer's The Field of Ethics.
(b) The History of Greek Reflection. Study of Plato's Theætetus and Aristotle's Ethics (Peters' or Welldon's translation).
Books recommended to be read:
Plato, Republic; Wallace, Epicureanism.
Attendance and exercises are compulsory.
Moral Philosophy-Prọfessor Watson.
Text-book: Watson's Outline of Philosophy with Notes Historical and Critical. Supplementary Lectures, Tuesday and Thursday. Attendance and exercises are compulsory.

Note.-Candidates in Mental and Moral Philosophy, who do not pass the April or supplemental examination, must in the session in which they desire again to try the examination, write the essays prescribed for extra-mural students, hand them in to the Tutor for examination and correction, and pay to the Registrar the tutorial fee of $\$ 5$.

## Special Voluntary Class, 1907-8-Professor Dyde.

A special course of lectures on Aesthetics one hour a week, Wednesday, 2 p.m., free and open to students in any of the faculties.

## For Extra-Mural Students.

Mental Philosophy.
Students are expected to show familiarity with the substance of the books mentioned below. They are recommended to take up the work in the following order:
I. Schwegler, History of Philosophy, XI-XV.

Plato, Theætetus (Dyde's Translation).
Plato, Republic, Bks. I, II.
Essay for 15th Oct.:-The relation of Plato to the Sophists.
2. Plato, Republic, Bks. III-VII.

Schwegler, History of Philosophy, XIV.
*Essay for Ist Nov.:-Plato's Theory of Education.
3. Aristotle, Nichomachean Ethics (Peters' Translation).

Schwegler, History of Philosophy, XVI.
Essay for 2Ist Dec.:-The relation of Aristotle's Ethics to his Psychology.
4. Schwegler, History of Philosophy, XVII-XXI.

Capes, Stoicism (New York: Pott, Young \& Co.).
Wallace, Epicureanism.
Essay for Ist Feb.:-Stoicism and Epicureanism.
5. Schwegler, History of Philosophy, XXII-XXVI. $\dagger$

Essay for I5th Feb.:-The Principles of the Cartesian Philosophy.
6. Schwegler, History of Philosophy, XXVII-XXXV.

Fraser, Selections from Berkeley.
Fraser, Berkeley (Blackwod's Philosophical Classics).
Essay for 14th March:-The Development of the Philosophy of Berkeley.

## Moral Philosophy-Professor Watson.

Students will be examined upon Watson's "Outline of Philosophy, with Supplementary Notes, Historical and Critical," and "Hedonistic Theories." Exercises will be prescribed. These are compulsory and they will be examined and corrected by the Tutor, under supervision of the Professor.

[^4]
## Honours.

Preliminary-Professor Watson.
Critical Study of the Philosophy of Kant.
Monday, Wednesday and Friday at 9 a.m.
Text-books:-Watson's Selections from Kant, and Caird's Critical Account of the Philosophy of Kant.

## Final.

Students desiring to write for Honours in Latin, Greek, French, German, English, History or Political Science, may complete their Honour Course by taking any one of the following departments:
A.-First Department.

Critical study of Hegel's Wissenschaft der Logik, Tuesday and Thursday at 12 a.m. Lectures on the Principles of Metaphysic, Monday and Wednesday at I2 a.m. Seminary (for students who take the whole course), Friday at 12 a.m. Professor Watson.

Lectures on the Principles of Aesthetics. Examination of Aristotle's Poetics. Professor Dyde. Essays for the Class of Aesthetics:-

15th Nov.:-Aristotle's conception of Comedy and Tragedy (Aristotle's Poetics).
20th Dec.:-Aristotle's conception of Poetry (Aristotle's Poetics).
7th Dec.:-Kant's Theory of Taste (Kritik of Judgment).
14th March-Beauty and Ugliness (Bosanquet's History of Aesthetic).
Note.-As a substitute for the essays required in this and the other departments a more comprehensive essay, not less than 40 pages of foolscap in length, may be offered.
Candidates will be examined on the following works:
Kant, as in Preliminary Honour Class.
Bacon, Novum Organum.
Hobbes, Leviathan.
Locke, Essay on the Human Understanding.
Hume, A Treatise on Human Nature.
Mill's Logic, Examination of Hamilton and Utilitarianism.
Spencer's First Principles, Data of Ethics.
Green's Prolegomena to Ethics.

> B.-Second Department.

Lectures on the Principles of Metaphysic, Monday and Wednesday at 12 a.m. Seminary (for students who take the whole course), Friday at 12 a.m.

[^5]Critical reading of Plato's Sophist in the original. Prof. Dyde.
Essays for Class in Plato:
15th Nov.:-Plato's Dialectic (Plato's Sophist).
20th Dec.:-The Sophistic Conception of the State. (Plato's Protagoras and Republic II, Aristotle's Politics I).
7th Feb.:-Plato's Proof of the Existence of God (Republic II, III, Laws X-XII).
14th March :-Aristotle's Definition of Tragedy (Aristotle's Poetics, Bosanquet's History of Aesthetic).
Candidates will be examined on the following works:
Kant, as in Preliminary Honour Class.
Plato, Theetetus, Sophist, Laws.
Aristotle, Nicomachean Ethics.
Green's Prolegomena to Ethics.
Books recommended to be read:
Campbell, Translation of Aeschylus; Whitelaw, Translation of Sophocles; Way, Translation of Euripides; Butcher, Aristotle's Poetics; Bosanquet, History of Aesthetic; Pater, Plato and Platonism; Wallace, Epicureanism; Maier, Die Syllogistik des Aristotles.

> C.-Third Department.

Critical Study of Hegel's Wissenschaft der Logik, Tuesday and Thursday at 12 a.m. Lectures on the Principles of Metaphysic, Monday and Wednesday at 12 a.m. Seminary (for students who take the whole course), Friday at 12 a.m. Professor Watson.

Examination of Hegel's Philosophy of Right (Dyde's Translation). Professor Dyde.
Essays for Class in Hegel's Phil. of Right:
15th Nov.: Hegel's Theory of Crime and Punishment (Phil. of Right, pp. 90-103; Bosanquet, chap. VIII).

20th Dec.: Time and Dialectic (Phil. of Right, section 3, 34I-360, etc.).
7th Feb.: The Nature of Evil (Phil. of Right, section 140).

14th March: Religion and the State (Phil. of Right, section 270).
Candidates will be examined on the following works:
Kant, as in Preliminary Honour Class.
Descartes, Discourse on Method and Meditations.
Leibnitz, Monadology.
Spinoza, Ethica, De Intellectus Emendatione.

Hegel, Wissenschaft der Logik, Philosophy of Religion, Philosophy of Right.
Green's Prolegomena to Ethics.
Books recommended to be read:
Caird, Hegel; Wallace, Hegel's Philosophy of Mind, Prolegomena to the Study of Hegel's Philosophy.

Mental and Moral Philosophy.
Students desiring to write for Honours in Mental and Moral Philosophy may take A and B, A and C, or $B$ and $C$.

## POLITICAL SCIENCE.

Professor-Adam Shortt, M.A.
Fellow-Oscar Skelton, M.A.

## Economics.

The lectures will include a discussion of the general principles of Political Economy.

Text-book for general reference: Gide's Principles of Political Economy.

## Politics.

The lectures will include a critical examination of the leading theories of the state, and a discussion of the nature of Social and Political Relations.

In both classes essays will be required.
Economics and Politics may be taken during the same session.

## For Extra-Mural Students.

Economics.
Candidates will be examined on the following books:
Seager's Introduction to Economics.
Cheney's Industrial and Social History of England.
Essays during session 1907-1908:-
An outline of the changes in English agricultural methods and organization from the eleventh to the eighteenth century, inclusive. Cheney and Seager.
A comparison of the mediæval craft guild and the modern trades union. Cheney and Seager.

The law of diminishing returns as applied to extractive industries. Seager, chap. 6.
The function of the Entrepreneur in present day economic society. Seager, chap. 8.
The services of the banking system in modern economic society. Seager, chap. 18.
The relation of the public to the railroads, as regards (a) subsidies, (b) regulation, (c) ownership. Seager, chap. 24.
Methods of preventing strikes and lock-outs. Seager, chap. 21.

## Politics.

Candidates will be examined on the following books:
Aristotle's Politics, Weldon's Translation, Bks. I, III, IV, V.
Locke's Essay on Civil Government.
Leroy Beaulieu, The Modern State.
Essays during Session 1907-1908.
A comparison of the views of Aristotle and Locke as to the origin of the state. Politics, Book I; Essay on Civil Government.

Aristotle's conception of the good citizen. Politics, Book III.
A general examination of Aristotle's views on education. Politics, Books IV, V.

A general examination of Locke's view of the state.
The relations of individuals to society. Leroy Beaulieu; Locke.

A comparison of the ancient and modern state.
The function of the state. Leroy Beaulieu.
A fee of $\$ 3$ is required.

## Honours.

## Preliminary.

This class will meet for the discussion of Economic, Social and Political Principles, and for the critical reading of portions of the work prescribed for Honours.

A course of lectures will be given on Canadian Economic and Political History.

Candidates will be examined on the following books:
Economics.
Smith's Wealth of Nations.
Mill's Principles of Political Economy.
Nicholson's Principles of Economics, Vol. I.
Ingram's History of Political Economy.

A spherical earth; mean radius; distances along a great circle, parallel of latitude, loxodrome; surveying a great circle, a parallel of latitude; projection of the sphere, stereographic, conical, globular, mercators; meridional parts.

A spheroidal earth; angle of the vertical; true radius vector.

Finding the meridian, latitude, time, etc.; solar, sidereal, and mean time, equation of time.

General descriptive and practical astronomy.
8. Elementary Theory of Functions.-One hour per week during the session, every alternate year, 1907-8.
Books, etc.:-
5. Work as in Dupuis' Solid Synthetic Geometry.
6. Reference to Taylor, Gibson, Edwards.
7. Reference to Dupuis' Spheric Trigonometry, Barlow and Bryan's Mathematical Astronomy. 8. Lectures.

## Groups III, IV.

9. Analytic Solid Geometry.-One hour per week during the session, every alternate year, 1907-8.

Synopsis of Work: Notation, direction, angles, etc.; oblique co-ordinates and ppd.; the line and the plane in space; conicoids to principal axes; generating lines and ruled surfaces; surfaces of revolution; tangent planes; curves of section; confocal conicoids; general equation and its transformations; rotation of axes; invariants; circular sections and umbilici; sections of the conicoids by a plane; axes and area of the section; curvature of surfaces; indicatrix, Meunier's theorem; study of tangent planes, tangent cone, normal planes, radius of curvature, etc., through partial derivatives; study of curves in space, Quetelets' theorem.
10. Calculus II.-One hour per week every alternate year, 1907-8.

Synopsis of Work: Partial differentials, $n$th differentials; Leibnitz's theorem; expansion of functions; various theorems; change of independent variable. Theory of plane curves; tangents, normals, etc.; intersection of curves; polars; pedals; tangentials; inverse curves; polar reciprocals; asymptotes; singular points, nodes, cusps, conjugate points, multiple points, etc. ; order of contact ; curvature; conic with 3rd order contact; envelopes; caustics; singular forms; max. and min., with two independent variables; LaGrange's criterion.

Integrable forms; hyperbolic functions; areas; lengths of curves, volumes, and surfaces; double and triple integration; formulæ of reduction; Pappus' theorems; moment of inertia, etc.; definite integrals; beta and gamma functions.
11. Differential Equations and Finite Differences.-One hour per week for the session, every alternate year.

Synopsis of Work: Nature and origin of differential equations; equations of first order and degree; exact equations; integrating factors; geometrical interpretations; singular solutions; discriminants and special loci; equations of first order and higher degree; Clairaut's form; applications to geometry and physics; intrinsic equations; trajectories; equations of and order; general linear equation with constant coefficients; operator $D+a$; symbolia methods; homogeneous linear equations; special cases; solution in series; simultaneous and partial differential equations.

Fundamental operation in finite differences; differences of the powers of zero; expansion in factorials; symbols of operations; Herschel's theorem; inverted Maclaurin's theorem; interpolation; LaGrange's formula; methods of approximation; mechanical quadrature; exact summation of series; Euler-Maclaurin sum series; approximate summation; increase of convergency.
12. Trigonometry II, and Quaternions.-One hour per week, every alternate year, 1908-9.

Synopsis of Work: Series for $n$th powers of $\sin a$ and $\cos a$; DeMoivre's theorem; Argand's diagram and complex quantity; properties of $V$ function; series for $\cos n a$ and $\sin n a$; roots of a complex; trigonometric functions expressed in series; series for circular functions; expansion in Bernoullian numbers; factorization of binomial of 12 dimensions, and of quadratic trinomial $\mathrm{g} 2 n$ dimensions; sine and cosine in factor series; certain series; expansion in trigonometric series; summation of trigonometric series; numerous exercises.

Vectors; addition and subtraction of vectors; multiplication and division of vectors; the quaternion; quaternion analysis; 3 or more vectors; applications to line and plane, to circle and sphere, to ellipse and ellipsoid. Investigations of vector equations of tangents, normals, evolutes, tangent plane, tangent cone, etc.; numerous exercises.
13. Conics II.-One hour a week for first term and two hours a week for second term in alternate years, 1908-9.

Synopsis of Work: General equation and its parameters; transformations; diametral lines; conjugate diameters; rotation of axes; invariants and their meaning; intersecting chords; contact of conics; osculation; constructions for $r$; evolute; trilinears and contracted methods; harmonic properties of triangle and quadrangle; triangles in perspective; trilinears of 2 nd order; discussion of leading equations; harmonicism; inscribed and circumscribed conics; self-conjugate triangle; tangential co-ordinates; circular points at infinity; foci; conics having double contact; conics fulfilling certain conditions; Pascal's and Brianchon's theorems; con-
tact and intersection of conics ; anharmonic relations ; degraded conics and rectilinear hyperbola; envelopes.
14. Determinants and Theory of Equations.-One hour a week for the first term, every alternate year, 1908-9.

Synopsis of Work: Determinants; matrices and their transformations; reciprocal determinants; skew and skewsymmetric determinants; circulants; continuants; various applications.

General equation and its graph; Descartes' rule of signs; symmetric functions; binomial equations; transformations; reciprocal equation; the cubic and the biquadratic; real and imaginary roots; solution of numerical equations; Horner's method of approximation; theorems of Fourier, Buden and Sturm; methods of elimination.
15. Algebra II.-One hour a week for the second term, every alternate year, 1908-9.

Synopsis of Work: Convergency of series; infinite products; limits of infinite series; summation; continued fractions, convergents and intermediate convergents; general continued fractions; indeterminate linear and quadratic equations; theory of numbers; theorems of Fermat, Lagrange, and Wilson; probability, expectation, local probability, etc.
Books, etc.:-
9. Reference to Aldis, Smith, Salmon.
ro. Reference to Edwards' Diff. Calculus. Williamson's Integral Calculus.
II. Reference to Johnson, Cohen.
12. Reference to Lock's Higher Trigonometry, Kelland and Tait's Quaternions.
13. Reference to Salmon's Conics.
14. Reference to Weld's Determinants, Burnside and Panton's Theory of Equations.
15. Reference to Hall and Knight's Higher Algebra.

Of Groups III and IV, 9, IO, II will be taken in session 1907-8.

Group I taken as a part of a Pass Course will count for Senior Mathematics and one of the optional subjects in Courses I and II as given on page 53, provided that in the examination on this group the candidate makes at least 33 per cent. on each subject, and an average of 50 per cent. on the whole group.

Candidates for Honours must make a minimum of 40 per cent. upon each subject of Group I, and 60 per cent. upon the whole group, at one examination, after which no further examination on this group will be required.

Candidates for Honours must make at least 50 per cent. upon the subjects numbered $5,6,7,8$, but honour standing will
be determined by the examination on the subjects numbered 9 , IO, II, $12,13,14$ and 15 .

The subjects of Groups II, III, and IV must be taken in not more than two examinations, and at any examination a candidate may offer any subject upon which he has failed at a previous examination. But $9,10,11,12,13,14$ and 15 must be taken at the final examination.

Candidates are recommended to follow the order of subjects as indicated above, as nearly as may be practicable.

## PHYSICS.

Professor Emeritus-D. H. Marshall, M.A., F.R.S.E.
Professor-Arthur L. Clark, Ph.D.
Associate Professor-N. R. Carmichael, M.A.
Lecturer-W. C. Baker, M.A.
Demonstrators-J. C. Pomeroy, D. J. Fraser, D. Elliş, G. McMillan, B.A.

> Junior Class.

Lectures and demonstrations are given in the following subjects: Dynamics and Properties of Matter, one hour per week; Heat and Light, one hour per week; Electricity, Magnetism and Sound, one hour per week.

Text-books: Carmichael's Physical Experiments, and other books to be announced at the opening of the session.

Weekly exercises are given throughout the session.
A knowledge of Algebra, Geometry, and the rudiments of Trigonometry on the part of the student is assumed.

Students are required to spend two hours a week in the Laboratory doing experimental work. Hours for this purpose will be arranged as far as possible to suit the students.

## Senior Class.

The work of this class is largely a continuation of that done in the Junior class.
Text-books: Watson's Text-Book of Physics.
Carmichael's Physical Experiments.
Weekly exercises are given throughout the session.
Students are required to spend two hours a week in the Laboratory doing experimental work.

Students who are allowed to take the Senior Class without having attended the Junior are strongly recommended to attend the lectures of the Junior Class, especially those upon Heat, Light, Electricity, Magnetism, and Sound. In the Junior Class the fundamental experiments in these subjects are shown and discussed, while in the Senior Class more attention is paid to the development of physical theory.

## Politics.

Maine's Ancient Law.
Wilson's The State; Historical and Practical Politics.
Dicey's Law and Public Opinion in England.
Lowell's Governments and Parties in Continental Europe.
Final.
This class will meet for the further discussion of Economic, Social and Political Principles.

Candidates must show familiarity with the substance of the following books:

Economics.
Cunningham's Western Civilization in its Economic Aspects. Scott's Money and Banking.
Seligman's Essays in Taxation.
Ripley's Pools and Trusts.
Commons' Trade Unionism and Labor Problems.
Greene's Corporation Finance.
Johnson's Railway Transportation.

## Politics.

Sidgwick's Development of European Polity.
Holland's Elements of Jurisprudence.
Arnold's Culture and Anarchy.
Rae's Contemporary Socialism.
An essay embodying independent work in some section of the Honour Course will be required from every candidate for Honours.

Extra-mural students are required to pay a fee of $\$ 5.00$ for either the Preliminary or Final Honour Class.

## MATHEMATICS.

Professor-N. F. Dupuis, M.A., F.R.S.C. Assistants-J. Matheson, M.A., L. A. H. Warren, M.A. Tutor-L. Malcolm, M.A.

TIME TABLE FOR MATHEMATICS.
(Italics denote Science Classes.)

| Hour | Mon. | Tues. | Wed. | Thur. | Frid. |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 8 |  | Math. II. | Math. II. |  | Math. II. |
| 9 | Math. I. | Math. I. | Math. I. | Math. I. | Math. I. |
| 10 | Math. II. Calcul. II. 2nd term. | Math. II. Senior. | Diff. Eq. <br> Fin. Dift. | Math. II. <br> Senior. | Calcul. II. |
| 11 | Synthetic Sol. Geom. | Calcul. I. | Theory of Functions. | Math. I | Math. I. ist term. |
| 3 | 二 Junior | Analyt. Sol. Geom. | Junior Conics I. ist term. Mod. Geom. and term. Astron. I. 2nd term. | Mod. Syn. Geometry. | Junior Conics I. |
| 4 | Trig. I. | Algebra I. |  |  |  |

Junior Class.
The theory and practice of Algebra to the Binomial theorem inclusive. Dupuis' Algebra-the first thirteen chapters, omitting chapter XI.

Geometry of the point line and circle in the plane. Parts I and II, and selections from Parts III, Dupuis' Plane Geometry.

Trigonometry, Elementary Principles, (2nd term).
Besides numerous class-exercises, periodical written exercises will be required.

## Senior Class.

Algebra-Dupuis' Algebra, from the twelfth chapter to the end.

Geometry-Part III of Dupuis' Plane Geometry, and the first I3I pages of Dupuis' Solid Geometry.

Trigonometry-Preceding De Moivre's theorem.
Besides numerous class exercises, periodical written exercises will be required.

## Honours.

Candidates who matriculate with Honours in Mathematics are not required, in their subsequent Honour Course, to take either the Junior or the Senior Class, but they are advised to read the Geometry of the Junior Class.

Candidates who do not matriculate with Honours must take the Junior Class as preparatory to their Honour work, but they need not take the Senior Class inasmuch as the work of this class is covered in the first group of Honour subjects.
Group I.
I. Synthetic Modern Gcometry.-One hour per week for the first term and two hours per week for the second term.

Work as in Dupuis' Plane Geometry, Parts III, IV, V, with exercises from various sources.
2. Algebra I.-One hour per week during the session.

Synopsis of Work: The progressions; permutations and combinations; binomial theorem; remainder theorem; solution of numerical equations with incommensurate roots; inequalities; undetermined coefficients and various applications, partial fractions, expansion of functions, etc.; continued fractions; logarithms; exponential and logarithmic series; recurring series; difference series; interpolation; summation of series; convergency of series.
3. Trigonometry I.-One hour per week during the session.

Synopsis of Work: Contracted methods with decimals; radians and degrees; trigonometric functions; interrelation of functions; variation of functions with increase of angle; graphs; solution of right-angled triangles; orthogonal projection; addition formulæ; transforming sums into products, and vice versa; multiple and submultiple angles; applications to triangles, quadrangles, and regular polygons; tables of functions, natural and logarithmic; logarithmic formulæ; inverse functions; solution of trigonometric equations; limits and approximations; series for sine and cosine. Numerous exercises.
4. Conics I.-Two hours per week for the first term and one hour per week for the second term.

Synopsis of Work: Co-ordinate systems; rectilinear and polar and their interrelations; co-ordinates of distinctive points ; point at infinity ; the straight line; standard equation; perpendiculars, bisectors, etc.; relations of two or more points and lines; collinearity and concurrence; the triangle and the quadrangle; translation of origin. Equations of two dimensions; factorization and the discriminant. The general equation. The circle, with its secant and tangent lines; inverse points and inversion; pole and polar; conjugate points; conjugate figures; Salmon's theorem; radical axis and centre; systems of coaxal circles. The parabola with its tangents and normals; centre of curvature; equation with one variable, etc. General conic and variations of asymptotes; conjugate axes; theorems of Apollonius and other theorems; ellipse and hyperbola; tangents, normals and pedals; eccentricangle; problems and exercises throughout.
Books, etc.:-
I. Dupuis' Plane Geometry, Parts III, IV, V.
2. Dupuis' Algebra, with examples from various sources. 3. Hobson and Jessop's, and also Lachlan and Fletcher's Plane Trigonometry.
4. Lectures, with examples from Smith and Loney.

> Group II.
5. Synthetic Solid Geometry.-One hour per week for the session.

Work as in Dupuis' Synthetic Solid Geometry.
6. Calculus $I$.-One hour per week during the session.

Synopsis of Work: Limits; functions; differential coefficient, and rules for finding it; tangents to curves; measurement of rates; inplicit functions and partial derivatives; motion in curved paths; fundamental integrals; integration by parts; Euler's theorem on homogeneous functions; tangents and normals; pedal equations; asymptotes; successive differentiation; Leibnitz's theorem; differential equation; Taylor's and Maclaurin's series; maxima and minima; radius of curvature; evolute; definite integrals; areas, lengths of curves, volumes and surfaces.
7. Spherical Trigonometry and Astronomy.-One hour per week for the session. Every alternate year, 1908-9.

Synopsis of Work: Three-faced corner and spheric triangle; polar triangle; limits of sides and angles; spherical excess; deduction of formula, cosine formula, sine formula, cotangent formula, geometric meaning of $\sin a \sin b \sin c$. Havre-sine formula; DeLambre's equations; Napier's analogies; solution of triangle; Napier's circular parts and applications, etc.
B.Sc in practical science, is also suitable for medical students.

Dr. C. K. Clarke, Medical Superintendent of the Toronto Hospital for the insane, will give a short course of lectures upon heredity and insanity in relation to crime and the treatment of the criminal.

## ELEMENTARY MORPHOLOGY.

Lectures or demonstrations will be given tri-weekly at 9. a.m. during the session. Part I will last from October until Christmas and will treat of general Biology and the every day lives of animals. Part II. will deal with the outlines of classification and will cover the rest of the session. It will be suitable for students taking the honour course in Geology or the course in Mining Engineering. Arts students who select the morphology option must take parts I. and II. Science students need take part II. only.

The lectures treat of protoplasm, cells, cell division, reproduction, early stages of development, tissues, organs, differences between animals and plants, general view of the invertebrata and of the vertebrata, organic evolution, every-day lives of animals.

The laboratory work consists of such dissections and demonstrations as will elucidate the subject of the lectures. The lectures are illustrated by diagrams, charts, and lantern transparencies. Textbooks: Comparative Zoology by J. S. Kingsley, (Henry Holt \& Co.) ; Animal Life by Jordan and Kellogg; (American Book Co.)

The senior leaving examination in biology of the Education Department is accepted in lieu of attendance and examination in this class.

## ELEMENTARY PHYSIOLOGY AND HYGIENE.

Lectures or demonstrations will be given on Tuesdays and 'Thursdays at 10 a.m. upon physiology, and on Fridays at 11 a.m. upon hygiene.

The lectures will treat of the functions of bones, joints and muscles; the relation of muscle and nerve; the work of blood and lymph; the circulation of these tissues; diet, digestion, absorption, metabolism, respiration and animal heat; excretion; nervous system and special senses; personal, household, municipal and national hygiene.

## Extra-Mural Students.

Extra-mural students who select the elementary morphology option are required to do the practical work outlined for Honour Matriculation in Zoology. They will be examined on Professor Ramsay Wright's High School Zoology.

Extra-mural students who select physiology and hygiene as the subjects of their Pass class may procure most of the specimens required in the study of the physiology, on depositing $\$ 10.00$ with the registrar. On receipt of such deposit, a set of specimens will be loaned to the students for half a session.* Students will be examined on Moore's Elementary Physiology (Longmans, Green \& Co.), and upon Pyle's Personal Hygiene (W. B. Saunders \& Co.)

## Honours.

Candidates who have not matriculated with honours in biology and who intend to take an honour course in the subject must take the pass class in elementary morphology.

[^6]The course in comparative and practical anatomy extends over two years, and the work of each year is read in class every-alternate session.

Preliminary honours are awarded on the honour papers of the first session in honours. The class in elementary physiology is part of the preliminary honours' course.

Final honours are awarded on the honour papers of both sessions taken together.

The lectures and demonstrations in "physiology" and "histology" are attended simultaneously by students. in medicine and arts.

Honor students are required to attend the course of lectures on the "Development and Structure of the Nervous System" which is given to medical students in the department of human anatomy. The honour work in physiology for the second year lasts during the whole session.

The study of animal forms in the museum will be under the direction of Professor McClement and will bebegun after the students have completed their dissections for the session.

Graduation in honours in the department of biology lessens, by one year, the length of the course required by the Medical Council of Ontario.

The Honour examinations in this department are held at the University only.

Honours. Extra-Mural Students.
Extra-mural students can procure the necessary marine forms for dissection by ordering them from "The Supply Department, Marine Biological Station, Woodshole, Mass., U. S." The histological specimens required for microscope study can be purchased from Thomas Little, Laboratory Assistant, Queen's

University, at the rate of 25 c . per slide, or $\$ 3.50$ for a complete set of fifty.

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\text { Session 1907-1908, } 12 \text { M. то I P.M. }
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Biology of Vertebrata.
Study of types of the different divisions of Vertebrata.
Histology and Embryology.
Physiology.
Daily laboratory work.
Dissections of the forms in Pratt's Vertebrate Zoology.
Session 1908-1909, i2 M. то i P.M.
Biology of Invertebrata.
Examination of typical specimens of the different classes.
Histology and Embryology.
Physiology.
Daily Laboratory Work.
Dissection of the forms in Pratt's Invertebrate Zoology.
Books for study and laboratory work:
Text-book of Physiology, 2 Vols., edited by E. A. Schafer, LL.D.
Halliburton's Hand-book of Physiology, last edition.
Claus and Sedgwick's or J. Arthur Thompson's Zoology.
Weidersheim's Elements of Comparative Anatomy.
Foster \& Langley's Histology or Dr. Stirling's.
Balfour \& Foster's Elements of Embryology.
Darwin's Origin of Species.

## CHEMISTRY.

Professor-William L. Goodwin, D.Sc., Edin.
Assistant Professor-John Waddell, B.A., D.Sc., Ph.D.
Lecturer-C. W. Dickson, M.A., Ph.D.
Demonstrators-Isaac Wood, M.A., M.D.; S. J. Schofield, B.A.; J. H. Stead, M.A.; F. L. Sine, M.A.; J. Hill, M.A.; W. E. H. Whinton.

> Junior Class.

Lectures: Monday and Tuesday at II a.m.
Laboratory: Wednesday at II a.m.
Chemical Species-Crystals and Crystallization-Chemical Change-Laws of Combination-Combining Weights-Relations of Heat to Chemical Changes-Notation-Equations-Nomenclature-Volume Relations of Gases in Chemical Change-Volume Formulæ-Molecular Weights-The Atomic Theory-Atomic Weights-Descriptive Chemistry of the Commoner Elements and their Compounds-The Periodic Law-Properties of Solutions-Electrolysis-Spectrum Ana-lysis-Chemical Calculations.

## Honours.

## Preliminary.

Students intending to complete the Honour Course in Physics are required to take the Preliminary Honour Class at the University.

Students should take Group I of Honour Mathematics before entering this Class.

The work includes:

1. Dynamics, two hours per week.
2. Heat, Thermodynamics, one hour per week.
3. Electricity and Magnetism, one hour per week.
J. J. Thomson's Elements of the Mathematical Theory of Electricity and Magnetism.
4. Experimental work, two hours per week.

Selected experiments illustrating the subjects treated in the lectures.
Besides the prescribed text-books students are expected to read sections from other books and articles from the Journals to which they are referred from time to time. These may be found in the Library of the Department.

Final.
This class must be taken at the University. The work includes:
I. Experimental work in the Laboratory.

Honour students are expected to spend a large portion of their time in the Laboratory. In the first year their work will consist of a selected course of advanced experiments in Mechanics, Heat, Light, Sound, Magnetism and Electricity; in the second year, of a small number of more elaborate measurements intended to acquaint them with some of the methods and instruments used in modern research.
2. An Elementary Course in Theoretical Mechanics.

Ziwet's. Theoretical Mechanics.
3. An Advanced Course in Theoretical Mechanics.
4. Heat. Kinetic Theory of Gases.
5. Physical Optics. Mathematical Theory of Selected Topics.
6. Electricity and Magnetism. Electric Waves, Conduction of

Electricity through Gases, Radioactivity.
Lectures are given upon subjects 4, 5, and 6 in alternate sessions. Subject 6 will be taken up in session 1907-8.

Honour Experimental Physics.
This class must be taken at the University.
The work required under this title in Honour Course C (I) and Specialists' Course VIII (6) consists of:
I. The Laboratory work of the Preliminary and Final Honour Physics classes (omitting portions which involve advanced mathematical theory).
2. Selected parts (not requiring advanced mathematics) of the courses of lectures given in the Honour Classes.
3. Reading of prescribed articles from magazines and books relating to the experiments performed.

## Library.

The principal Physical Journals and books relating to the Lectures and Laboratory work are kept in the Library of the Physics Department where they may be freely consulted by the students.

## For. Extra-Mural Students.

Extra-mural students are expected to do the weekly exercises prescribed. They should also write to the tutor stating what facilities, if any, they have for making experiments. Experiments will be prescribed to suit their circumstances as far as possible.

Under special circumstances, a limited amount of apparatus may be sent from the Laboratory upon conditions to be arranged.

Junior Class.
A syllabus of the work stating the text-books required and the portions to be read with information about exercises, etc., will be sent to the students. The sections will be selected to correspond as far as possible with the work done by intra-mural students.

## Senior Class.

The text-book required: Watson's Text-book of Physics.
A syllabus will be sent prescribing the sections to be read and giving information about exercises, etc.

## Preliminary Honours.

Taking this Class extra-murally does not qualify a student to proceed to the Final Honour Class.

A syllabus of the work, stating the text-books required and the portions to be read, and the experiments to be performed, will be sent.

## BOTANY.

Professor-Rev. James Fowler, M.A., LL.D.
Assistant Professor-W. T. McClement, M.A., D.Sc.

## Pass Class.

This course is designed to furnish an intelligent conception of the structure, life processes, and life relations of plants, for students who may pursue the subject no further. It also is a foundation for advanced work for those who desire to make Botany a special study. The work consists of lectures, discussions and laboratory experiments with plants and plant products. The principles of classification are studied from specimens of the chief orders of Canadian plants.
Lectures and Laboratory-io a.m., Tuesday, Wednesday and Thursday.
Text-books:-Leavitt, Outlines of Botany.
Gray, Field, Forest and Garden Botany.
(These may be had bound together Amer. Book Co.) Coulter, Plant Relations (Appleton).

## Honoùr Botany. Preliminary Honours.

The work of this course is largely a laboratory study of the structure and the physiological processes of plants. Material, either fresh or preserved, illustrating the evolution of plant structures, is studied with the aid of dissecting and compound miscroscopes. Permanent records, in the form of ink drawings, are required. An experimental course in plant physiology is accompanied by lectures, discussions, and study of prescribed texts. Laboratory:-10-12, Monday, Wednesday and Friday. Lectures:-II-I2, Tuesday and Thursday. Text-books:-Coulter, Plant Structures (Appleton).

Campbell, Evolution of Plants (Macmillan).
Atkinson, College Botany, Parts I and II (Holt \& Co.).

## Final Honours.

The subjects studied in this course are Plant Histology, Ecology, and Taxonomy. A practical course in the preparation of acceptable mounts of the various vegetable structures accompanies a study of structural modification due to environment. Field studies during the autumn months are obligatory. The resources of the herbarium are adequate to a study of the important orders and genera.
Laboratory:-10-12, Monday, Wednesday and Friday.
Lectures:-II-I2, Tuesday and Thursday.

> Text-books:-Chamberlain, Methods in Plant Histology. Atkinson, College Botany.
> Gray, Manual of Botany.
> Underhill, Ferns and Their Allies.
> Grout, Mosses with a Handlens.

## For Extra-Mural Students.

The work is, as far as possible, the same as that done by students attending the regular classes. Material for study is either furnished by the University, or directions are given for its collection by the student. The results of the study of this material are to be promptly forwarded to the University, where the instructor in charge will examine the reports and recommend further work. A good handlens and simple dissecting instruments are required in the Pass course; a compound micrscope and simple physical apparatus for the Preliminary Honours, and for Final Honours the addition of microtome and knife, embedding and staining apparatus and access to a good herbarium.

The University will furnish a compound microscope, on condition that a deposit of $\$ 36$ be made by the student. On the return of the instrument in good condition, this deposit will be refunded, less $\$ 5$ for its use for each session.

## ANIMAL BIOLOGY.

Professor-A. P. Knight, M.A., M.D.
Lecturer-F. Etherington, M.D., L.R.C.P., Edin.
Students in Medicine are required to take the class in elementary morphology.

Students in Arts have the option of taking either the class in elementary morphology, or the class in elementary physiology and hygiene.

Students in Arts who intend subsequently to study medicine are advised to take the pass and honour classes and thus complete their physiology and histology during their undergraduate course. Besides the special course for B.A., M.D., the honour course in science, C, number 2, (with Animal Biology) page 70, or the specialists' course in science, page 74 , is suitable for this purpose. The course in sanitary engineering for the degree of

Books: Alex. Smith's General Inorganic Chemistry (The Century Co., New York).
Waddell's Arithmetic of Chemistry (The Macmillan Company, New York), Chapters I-V.
Beginners are advised to read Walker's Elementary Inorganic Chemistry (G. Bell \& Sons, London).

## Senior Class.

## I. Organic Chemistry-Thursday at II a.m.

II. Chemical Laws and Theories-Friday at II a.m.
III. Special Chemistry of the Metals, their occurrence in nature, reduction and uses-Thursday at 8 a.m.
(II) with either (I) or (III) is required.

Books: Van Deventer's Physical Chemistry (J. Wiley \& Sons). Cohen's Theoretical Organic Chemistry (Macmillan \& Co.).
Richter's Inorganic Chemistry, Chapters on Metals (P. Blakiston's Son \& Co.).
Waddell's Arithmetic of Chemistry, Chap. VI to the end. Students intending to proceed to Honours in Chemistry may begin Qualitative Analysis in the year in which they take Senior Chemistry.

Honours.

## Preliminary.

(May be taken as a Pass Class.)
I. Organic Chemistry.

The detailed study of selected groups of carbon compounds and their preparation in the Laboratory. (I. Organic Chemistry of the Senior Class must be taken along with this, if not already taken. A knowledge of Nos. I, II and III of the Senior Class is required for Honours).
Wednesday, 2 to 5 p.m.
2. Industrial Chemistry (or *Physiological and Pathological Chemistry). Monday and Thursday at 3 p.m.
3. Crystallography (Elementary). See Mineralogy (First Term).
4. Qualitative Analysis and Blowpiping.
5. Qualitative Analysis of Minerals, \&c., or *Urinalysis, \&c. Students are required to complete the first 25 introductory exercises in Noyes's Qualitative Analysis, and to hand in their note--books for inspection. This must be done before beginning the analysis of unknown substances.

Books:
Cohen's Practical Organic Chemistry for Advanced Students (Macmillan \& Co., London).
Simon's Physiological Chemistry (Lea Brothers \& Co., Philadelphia).
Williams' Crystallography (Henry Holt \& Co.).
Arthur A. Noyes's Qualitative Analysis (The Macmillan Co., New York).
Thorp's Industrial Chemistry (The Macmillan Co., New York).
Treadwell's Analytical Chemistry, Vol. I., Qualitative Analysis, Translated by Hall; (Wiley \& Sons).
Syllabus of Industrial Chemistry.
Lixiviation, Levigation, Evaporation, Distillation, Sublimation, Filtration, Crystallization, Calcination, Refrigeration, Density, Water, Sulphur, Sulphuric Acid, Salt, Hydrochloric Acid and Sodium Sulphate, Soda, Chlorine, Fertilizers, Lime, Cement, and Plaster of Paris, Phosphorus, Arsenic Compounds, Sulphates, Pigments, Petroleum.
Nitric Acid, Ammonia, Potash, Glass, Ceramics, Bromine, Iodine, Water Glass, Peroxides, Oxygen, Cyanides, Carbon Bi-sulphide, Carbon Tetrachloride, Manganates and Permanganates, Destructive Distillation of Wood, Illuminating Gas, Coal Tar, Vegetable and Animal Oils, Soap, Candles, Glycerine, Starch, Dextrine and Glucose, Cane Sugar, Fermentation Industries, Explosives, Textile Industries (Bleaching and Dyeing), Paper.

## Final.

6. Physical Chemistry: Kinetic Theory of Gases; Properties of Solutions; The Periodic Law; Thermochemistry; Electrochemistry; Photochemistry.
Friday at 3 p.m. (First Term), and Wednesday and Friday at 3 p.m. (Second Term).
7. History of Chemistry.

Tuesday at 3 p.m. (Second Term).
8. Quantitative Analysis.
9. Assaying.

Subjects (I), (2) and (3) must be taken at one examination, but may be taken without (4) and (5).
Subjects (6) and (7) must be taken at one examination, but may be taken without (8) and (9).
Books:
Walker's Physical Chemistry (Macmillan \& Co.). Ostwald's General Chemistry (Macmillan \& Co.).
Meyer's Modern Theories of Chemistry.

[^7]Ladenburg's History of Chemistry (W. F. Clay, Edinburgh). Rodwell's Birth of Chemistry (Macmillan \& Co.).
Bolton's Quantitative Analysis (J. Wiley \& Sons).
Furman's Manual of Assaying (J. Wiley \& Sons).
Waddell's Arithmetic of Chemistry (The Macmillan Co.).
Syllabus of Quantitative Analysis and Assaying.

1. Barium Chloride- $\mathrm{Ba}, \mathrm{Cl}, \mathrm{H}_{2} \mathrm{O}$
2. Magnesium Sulphate- Mg O
3. An Ammonium Salt- $\mathrm{NH}_{3}$
4. A Phosphate- $\mathrm{P}_{2} \mathrm{O}_{5}$
5. Dolomite- $\mathrm{CaO}, \mathrm{Mg} \mathrm{O}, \mathrm{SiO}_{2}, \mathrm{Fe}_{2} \mathrm{O}_{3}, \mathrm{CO}_{2}$
6. Coal-water, volatile matter, fixed carbon, ash
7. Bleaching Powder-available chlorine
8. Iron Ore-qualitative analysis ; determination of $\mathrm{Fe}, \mathrm{SiO}_{2}, \mathrm{~S}$
9. Pig iron- $\mathrm{Si}, \mathrm{P}, \mathrm{Mn}, \mathrm{C}$
10. Zinc ore- Zn
II. Lead ore- Pb

I2. Copper ore- Cu by electrolytic and cyanide methods
13. Nickel ore-Ni by electrolytic methods
14. Silver Coin-Ag by Cupellation.
15. Pig Lead-Ag and Au.
16. Gold and Silver Ores-Au and Ag by pot assay.
17. Silver ore- Ag by blowpipe assay.
18. Barite- $\mathrm{BaO}, \mathrm{SrO}, \mathrm{S} \mathrm{O}_{3}$
19. Bronze- $\mathrm{Cu}, \mathrm{Sn}, \mathrm{Zn}$
20. Alkalimetry -
21. Acidmetry-
22. Chrome iron ore $\mathrm{Cr}_{2} \mathrm{O}_{3}$
23. Feldspar- $\mathrm{SiO}_{2}, \mathrm{Al}_{2} \mathrm{O}_{3}, \mathrm{CaO}, \mathrm{MgO}, \mathrm{K}_{2} \mathrm{O}, \mathrm{Na}_{2} \mathrm{O}$,
24. Titaniferous iron ore- $\mathrm{TiO}_{2}, \mathrm{Fe}, \mathrm{SiO}_{2}, \mathrm{~S}, \mathrm{P}, \mathrm{MnO}, \mathrm{CaO}$, Mg O
25. Arsenopyrite-As

## For Extra-mural Students.

Extra-mural students are required to do promptly the work set by the Tutor and will not be admitted to examination until this work is completed.

Junior.
Books to be read:
Alex. Smith's General Inorganic Chemistry (The Century Co., New York).
Waddell's Arithmetic of Chemistry (The Macmillan Co., New York), Chapters I-IV.

Senior.
Books to be read:
Van Deventer's Physical Chemistry (J. Wiley \& Son, New York).

Waddell's Arithmetic of Chemistry, Chap. VI to end. Cohen's, Theoretical Organic Chemistry (Macmillan \& Co.). Richter's Inorganic Chemistry (P. Blakiston's. Son \& Co., Philadelphia). (Chapters on Metals).
The work in Cohen and Richter is to be selected under the guidance of the Tutor.

For Students in Medicine.
First Year.
Monday and Tuesday at II a.m., and Thursday, iI a.m. to 12.30 p.m.

The Lectures of the Junior Arts Class with Laboratory practice.

## Second Year.

Thursday and Friday, at II a.m.
Chemical Laws and Theories, and Organic Chemistry (Senior Arts Class).

Analytical Chemistry.
N.B.-Before taking this class students must pass the examination in Junior Chemistry.

First Term.-Saturday, 9 a.m. to II a.m. or II a.m. to I p.m.

Systematic Testing of Chemical Substances.
Chemical Toxicology.
Second Term.-Saturday, 9 a.m. to II a.m. or il a.m. to I p.m.

Urinalysis.
Physiological Chemistry.
Analysis of Milk and Water.
Books:
Van Deventer's Physical Chemistry (Wiley \& Sons).
Waddell's Arithmetic of Chemistry.
Simon's Manual of Chemistry (Lea Brothers \& Co., Philadelphia).
Irish's Qualitative Analysis.
Junior, Senior and Preliminary Honours of the Arts course cover all the Chemistry required of students of Medicine.

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\begin{gathered}
\text { Mineralogy. } \\
\text { (Ontario Hall, third floor.) } \\
\text { Professor-William Nicol, M.A. } \\
\text { Lecturer-M. B. Baker, B.A., B.Sc. } \\
\text { Intra-Mural. }
\end{gathered}
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Students in Mineralogy are expected to take part in the field
excursions held during the Fall Term. The cost of the field work will not exceed five dollars.

Pass and Preliminary Honours may be taken in one year by students in Honours.

Students intending to take Mineralogy are advised to take Junior Chemistry and Junior Physics before commencing it.

Each student in this department is supplied with a locked cabinet containing about 100 mineral specimens for which a cash deposit of ten dollars must be made and a receipt given, and an agreement made to return the minerals at the close of the session.

One of the rooms in connection with the Department of Mineralogy has been furnished as a study and consulting room for students in this department. The Professor or his assistant will be available for consultation at hours when classes are not being held. Systematic and illustrative collections of minerals, crystals and models are on exhibition.

The Department is furnished with a first-class lantern and projection apparatus.

Books from the Library of the Department of Mineralogy and from the Professor's private library may be obtained by application to the Professor.

## Extra-Mural.

Examinations are held only at the University.
In addition to essays and correspondence, extra-mural students are required to determine and describe the minerals in collections furnished by the lecturer.

For extra-mural students a collection of wooden crystal models may be obtained for two weeks by depositing five dollars with the Registrar, to be refunded when the models are returned.

> Students Pay Express Charges.

A collection of rocks, minerals and fossils for illustrating Miller's "Minerals and How They Occur" will be sent by express to each extra-mural student as soon as the deposit of ten dollars has been made with the Registrar. This collection must be returned at the close of the session, when the deposit will be returned, less breakage and loss, if any. Express charges must be paid by students.

Text-books indicated by a star in the following lists and a set of blowpipe apparatus must be secured by the students.

Uglow \& Co., Booksellers, Princess St., Kingston, will supply necessary books, and McKelvey \& Birch, Brock St., Kingston, will supply apparatus.

## Mineralogy I.

Pass.
I. Elementary Mineralogy.
2. Description and determination of the following minerals:

Diamond, graphite, native arsenic, native silver, native gold, native copper, stibnite, molybdenite, cinnabar, galenite, chalcocite, malachite, azurite, sphalerite, niccolite, smaltite, chloanthite, pyrrhotite, bornite, chalcopyrite, pyrite, marcasite, arsenopyrite, halite, fluorite, quartz and prin, vars, corundum, hæmatite, magnetite, chromite, pyrolusite, psilomelane, limonite, calcite, dolomite, siderite, orthoclase, plagioclase, pyroxene and vars, olivine, amphibole and vars, garnet, tourmaline, stilbite, analcite, natrolite, muscovite, biotite, serpentine, talc, sphene, zircon, staurolite, apatite, barite, celestite, gypmsum, coal and vars.
Text-book: *Miller's Minerals and How They Occur.
The class meets in the Mineralogy lecture-room, Ontario Hall, at 9 a.m., on Mondays.
3. Elementary Crystallography.

A course of fifteen lectures delivered at the opening of the session.
Text-book: *Williams' Crystallography (Henry Holt \& Co.).
4. Blowpipe Analysis- (a) A course of practical demonstrations to illustrate and explain the reactions in studying the chemical properties of minerals. (b) A practical class in which the experiments seen in the lectures are performed by the students. Text-book: *Brush \& Penfield's Determinative Mineralogy and Blowpipe Analysis, 1905.
Books for Reference:
Cornwall's Translation of Plattner's Manual of Qualitative and Quantitative Analysis with the Blowpipe, 7th Ed. (Van Nostrand Co.).
Cornwall's Manual of Blowpipe Analysis (Van Nostrand Co.). Landauer's Blowpipe Analysis.
Endlich's Manual of Qualitative Blowpipe Analysis.
Moses \& Parsons' Mineralogy, Crystallography and Blowpipe Analysis, 2nd Ed.
Students must supply their own blowpipe apparatus.
The class meets in the blowpipe lecture-room, Ontario Hall, on Friday afternoons, from 2 to 4 o'clock.

## Honours. <br> Preliminary.

(A knowledge of German is desirable).
I. Systematic Mineralogy, illustrated by specimens, charts, lan-tern-slides, etc., Tuesday and Wednesday, II a.m. and Practical Class at hours convenient for members.

Text-book: Dana's Text-book of Mineralogy, 1905. (Wiley \& Sons).
Books for Reference:
Moses' characters of crystals, 1899.
Miers' Mineralogy (Macmillan \& Co.).
Van Horn's General and Special Mineralogy. In Library. Naumann-Zirkel's Mineralogie.
Tschermak's Mineralogie.
2. Practical Crystallography.

Practical study of crystal forms by means of crystals, and wire and wooden models. Two demonstrations per week are given at hours to suit the members of the class.
3. Qualitative analysis of minerals by blowpipe and wet re-agents:-The course in Qualitative Analysis in connection with Preliminary Honour Chemistry and, in addition, the analysis of selected mineral samples to be secured by the students individually from the Professor. Written reports of these must be handed in.
Lectures on Qualitative Analysis.
Text-book: Fresenius' Qualitative Analysis.
Books for Reference:
Ostwald's Foundations of Analytical Chemistry (Macmillan \& Co.).
Menschutkin's Analytical Chemistry (Macmillan \& Co.).
4. Essays on prescribed subjects.

Final.
I. Descriptive Mineralogy.

Description and classification of the commonly occurring minerals, special attention being given to Canadian ores and rock-forming minerals. Study hours are arranged to suit members of class. Attendance compulsory.
Text-book: Dana's System of Mineralogy, 6th Ed. (Wiley \& Sons).
Books for Reference:
Chapman's Minerals and Geology of Ontario and Quebec, 3rd Ed. (Copp Clark Co.) (Library).
Commissioners' Report on Mineral Resources of Ontario, 1890. (Library).

Reports of Geological Survey. New series 1885-1906. (Library).
Reports of Bureau of Mines. (Library).
Foote's Catalogue of Minerals. (Library).
2. Determinative Mineralogy.

Practical instruction in the determination of minerals by means of the blowpipe and by field tests. Tuesday, I-3 p.m.
Examination of specimens from cabinets. Wednesday and Thursday, I p.m. Attendance compulsory.

Text-books: Brush \& Penfield's Manual of Determinative Mineralogy and Blowpipe Analysis (1905).
Crosby's Tables for the Determination of Common Minerals.
Eakle's Mineral Tables.
3. Quantitative Analysis of Minerals (selected samples).

Text-book: Fresenius' Quantitative Analysis.
Lectures on Quantitative Analysis.
4. Economic Geology. (See under Geology).
5. Petrography. (See under Geology).
6. The use of heavy solutions in separating minerals for rock analysis.
7. Use of Contact and Reflecting Goniometer.
8. Drawing Crystals from Goniometric Measurements.
9. Courses of lectures on Economic Mineralogy and History of Mineralogy. These lectures will be illustrated by lanternslides, and will be delivered at hours convenient for the members of the class.
10. Essays to be handed in as follows:

Oct. 31, 1907-Mineralogy among the Greeks and Romans.
Nov. 30, 1907-Three Modern Mineralogists.
Dec. 16, 1907-The Diamond.
Jan. 13, 1908-Graphite and its uses.
Feb. 28, 1908-Quartz as a mineral and as a precious stone.
Mar. 25, 1908-The composition of the silicates.
Books for Reference:
The Mineral Industry.
Reports of Bureau of Mines, 1891-1906. (Library).
Transactions of Canadian Mining Institute.
American Journal of Science. (Library).
Wilmott's Mineral Wealth of Canada. (Library).
Books for Reading:
Hugh Miller's Works.
Lyell's Principles of Geology.
The Professor reserves the right to retain essays of merit for use in the library of the department.

## GEOLOGY.

Professor-Willet G. Miller, M.A., F.G.S.A. Professor-R. W. Brock, M.A., F.G.S.A. Lecturer-M. B. Baker, B.A., B.Sc.
Students taking work in this department have access to the Geological and Mineralogical museum of Queen's

University and the School of Mining, and to the Geological library and reading room.

The petrographical laboratory is supplied with electric power, diamond saws and other apparatus required in the preparation of thin sections of rocks and minerals for examination under the microscope.

The microscope room is provided with several instruments of the latest and most approved designs.

The chemical laboratory in connection with the Geological Department is supplied with the necessary equipment for the chemical investigation of rocks.

A corresponding tutor has been appointed to communicate with extra-mural students.

## Pass.

(Students taking Geology, who have not or are not taking Pass Mineralogy, are requested to attend the brief course of lectures on minerals delivered specially for Geology students at the beginning of the fall term).

The following themes will be treated of in the lectures: The planetary relations of the earth; the atmosphere; water; solid crust; probable nature of the earth's interior; rocks ; their general megascopic and miscroscopic characters and classification; volcanic action; earthquakes; upheaval; subsidence; geological effects produced by heat, air, water and life; bosses; dykes; veins; stratification; dip; strike; anticline and syncline; faults; foliation; nature and uses of fossils; stratigraphical geology; outline of geological history ; economic geology, etc.

The lectures are illustrated by means of maps, diagrams and lantern views.

The laboratory work will consist of the examination of typical specimens of the different groups of fossil plants and animals, and of hand specimens of the more common rocks.

During the months of October and November excursions will be made to places of geological interest in the vicinity of Kingston. All students are expected to join these excursions. The cost will not exceed five dollars.

Essays required on prescribed subjects.
Students are expected to provide themselves with some elementary book on the subject. W. B. Scott's "Introduction to Geology," (the MacMillan Co., price $\$ 1.90$ ) is recommended.

## Books for Reference:

Dana's Manual of Geology.
Le Conte's Elements of Geology (5th Ed. by H. E. Fairchild). Chapman's Minerals and Geology of Central Canada.
Kemp's Hand-book of Rocks.
Extra-mural students are advised to read Le Conte's Elements of Geology (5th edition), or Geikie's classbook of Geology (4th edition) and Norton's Elements of Geology (Ginn \& Co.) They will also be required to write essays on prescribed subjects.

Students who are not taking Mineralogy are advised to pay particular attention to Chapter I of Scott's Geology, and to provide themselves with a collection of the principal rock-forming minerals.

## Honours.

## Preliminary.

(Students taking Preliminary Honour Geology are required to take or to have taken Crystallography).
Lectures on:
Physical Geography, Petrography and Palæontology, Economic Geology.

The laboratory work will consist of the preparation of thin sections of minerals and rocks and their microscopic determination.

The museum work will consist of the megascopic determination of rocks and the naming and classification of Canadian fossils.

Field work comprises observations upon weathering of rocks, shore phenomena; glacial phenomena; igneous; sedimentary and metamorphic rocks; faulting; folds;
joints; cleavage. Practice in geological mapping and construction of sections; measuring the thickness of strata and determining the relative ages of geological structures. Essays are required on prescribed subjects. Candidates will also be examined on the following :

Davis', Page's or Geikie's Physical Geography.
Chapman's Minerals and Geology of Central Canada, Part IV. Geology Vol. I, Chamberlain and Salisbury.
Luquer's Minerals in Rock Sections.
Kemp's Hand-book of Rocks.
Books of Reference:
Wood's Elementary Palæontology.
Harker's Petrology for Students.
Dana's Text-book of Mineralogy.
Cole's Aids in Practical Geology.
Nature of Ore Deposits, Beck (Weed's Translation).
Ore Deposits, Kemp.
Reports of the Geological Survey of Canada and the United States.
Students are advised to devote as much time as possible to field work during the preceeding long vacation, and to collect material for study in the laboratory during the winter. Opportunities are usually afforded advanced students for engaging in field work during the summer vacation.

## Final.

Lectues on:
Economic Geology.
Petrography.
Palæontology.
Geology of Canada.
Geology in its relations to Mining and Agriculture.
Construction of Geological Maps and Sections.
Laboratory, Museum and Field work.
Candidates will also be examined on the following:
Chamberlain and Salisbury's Geology, Vols. I, II, and III.
Geikie's Text-book of Geology (4th Edition).
Geikie's Field Geology.
Chapman's Minerals and Geology of Central Canada, Parts IV and V.
Dawson's Hand-book of Canadian Geology.
Geikie's Founders of Geology.

Zittel's History of Geology.
Branner \& Newson's Syllabus of Economic Geology.
Kemp's Ore Deposits of the United States and Canada.
Books for Reference :
Rosenbusch's Elemente der Gesteinslehre.
Rosenbusch's Microscopical Physiography of Rock-forming Minerals.
Zirkel's Petrographie, Vols. I, II and III.
Harker's Petrology for Students.
Nicholson's Palæontology. (Eastman).
Zittel's Text of Palæontology. (Eastman).
Williams' Geological Biology.
Dawson's Ice Age in Canada.
Wright's Ice Age in North America.
Phillips' Ore Deposits.
Beck's Lehre von den Erzlagerstätten.
Students are advised not to undertake the work in Final Honour Geology until they have required a sufficient knowledge of Chemistry and Mineralogy. They should be prepared to devote a large part of their time to the subject throughout the session. Each member of the class will be encouraged to undertake research work, for which the surrounding district offers exceptional opportunities.

## ART. XI-POST-GRADUATE DEGREES.

Doctor of Laws (LL.D.)
This degree is honorary, and is awarded for literary, scientific or professional distinction.

Degree of Bachelor of Pedagogy (B. Paed.).
Candidates must comp.y with the following conditions :
(I) They must possess the degree of B.A. or M.A. from a recognized University and a permanent first-class or high school assistant's certificate granted by the Education Department of Ontario, or a certificate of equal value.
(2) They must submit certificates of successful experience in teaching.
(3) They must register as intra-mural or extra-mural students not later than October 16th. (Fee \$Io).
(4) The examination takes place in April and September. (The fee for examination is $\$$ Io, and for the degree $\$ 20$. Both fees must be paid to the Registrar not later than April Ist or September Ist).

## SUBJECTS OF EXAMINATION.

A.-History of Mental and Moral Philosophy.

Plato's Republic (Davies \& Vaughan's or Jowett's Translation).
Descartes' Method and Meditations (Veitch).
Mill's Examination of Hamilton and Utilitarianism.
Candidates are recommended to consult Bosanquet's Companion to Plato's Republic, Nettleship's Lectures on Plato's Republic ("Philosophical Lectures," Vol. II.) and his article on Plato's Theory of Education in "Hellenica," Caird's article on "Cartesianism" in his "Essays Literary and Philosophic," Watson's Hedonistic Theories, and Windelband's History of Ancient Philosophy.
B.-Principles of Psychology and Ethics.

Wundt's Outlines of Psychology.
Bosanquet's Psychology of the Moral Self.
Stout's Manual of Psychology.
Mackenzie's Manual of Ethics.
C.-History and Science of Education.

Bosanquet's Education of the Young in the Republic of Plato. Burnet's Aristotle on Education.
Davidson's Ancient Educational Ideals.
Bowen's Froebel and Education by Self-activity.
Guyau's Education and Heredity.
Laurie's Comenius.
Herbert Spencer's Education.
Fouillee's Education from a National Standpoint.
The work under any section ( $A, B$, or $C$ ) may be taken, and will be examined on, separately.

Candidates taking this course away from the University will require to pay a tutorial fee of $\$ 3$ for each section.

Candidates may secure tutorial assistance on any section during the college session, and also during the summer vacation.

## Degree of Doctor of Pedagogy (D.Paed.).

Candidates must comply with the following conditions:
(I) They must possess the degree of M.A. or B.Paed. and must satisfy the Senate of their ability to proceed to the degree of Doctor of Pedagogy.
(2) They must hold (a) a certificate as school inspector or (b) a permanent certificate as specialist granted by the Education Department or (c) a certificate of equal value.
(3) They must submit certificates of successful experience as teachers or school inspectors.
(4) The degree cannot be taken in less than three years after graduation as Bachelor of Pedagogy or Master of Arts.
(5) The candidate must register not later than October 16th, either as an extra-mural or intra-mural student, each session in which work is taken.
(6) A thesis on some educational topic must be sub-
mitted through the Registrar not later than the first day of March of the year in which the candidate comes up for examination.
(7) The examination takes place in April. (The fee is $\$ \mathrm{Io}$ and the fee for the degree $\$ 50$. Both fees must be paid to the Registrar not later than April Ist).

## SUBJECTS OF EXAMINATION.

A.-History of Mental and Moral Philosophy.

Höffding's History of Modern Philosophy.
Leibnitz's Monadology (Latta).
The Philosophy of Kant (Watson's Selections).
B.-Psychology and Ethics.

Wundt's Physiological Psychology.
James' Principles of Psychology.
Ward's "Psychology" in Encyclopædia Britannica.
Stout's Analytical Psychology.
Adamson's Lectures on Psychology (Works, Vol. II).
Spencer's Data of Ethics.
Bosanquet's Philosophical Theory of the State.
C.-History and Science of Education.

Bacon's Advancement of Learning.
Rousseau's Emile.
Pestalozzi's Leonard \& Gertrude (Channing).
De Garmo's Herbart and the Herbartians.
Froebel's Education of Man (Hailman).
Sir J. G. Fitch's Thomas and Matthew Arnold.
Matthew Arnold's Reports on the Elementary Schools in England.
J. R. Russell's The German Higher Schools.

Rosenkranz' Philosophy of Education.
Hinsdale's Horace Mann.
Harris' Psychologic Foundations of Education.
Munsterberg's Psychology and Life.
Dewey's School and Society.
Compayre's History of Pedagogy.
The Chief Recent Educational Reports.
The work under any section (A, B, or C) may be taken, and will be examined on, separately.

Candidates taking this course away from the University will require to pay a tutorial fee of $\$ 5$ for each section.

Arrangements have been made to have in the Library duplicate sets of the books required. Extra-mural students can secure these by depositing $\$ 2$ for one volume, or $\$ 5$ for three volumes, and paying postage both ways. Students desiring to secure books will kindly correspond with Miss Lois Saunders, Librarian.

## DEGREE OF DOCTOR OF PHILOSOPHY (Ph.D.) AND DOCTOR OF SCIENCE (D.Sc.)

I. Candidates for these degrees must comply with one of the following conditions:
(a) If they offer themselves for the degree of Ph.D. or D.Sc. in any two of the Arts subjects, they must previously have taken the degree of M.A. in these subjects, or must satisfy the Senate of their ability to proceed with the course.
(b) If they offer themselves for the degree of Ph.D. in one of the Arts subjects and either Old Testament Language and Literature or New Testament Language and Literature they must have previously obtained the degree of M.A. or B.A. with first-class honours in the Arts subjects chosen, have completed their course in Theology, and have passed the examination in half of the course for B.D.
(c) If they offer themselves for the degree of Ph.D. in Old Testament Language and Literature and New Testament Language and Literature they must have previously taken an Arts degree and the degree of B.D.
2. Neither of these degrees can be obtained in less time than three years after the above conditions have been complied with.
3. Candidates must submit a thesis on some subject connected with their special course embodying the results of original investigation.
4. Candidates for these degrees must make application through the Registrar to the Senate to be allowed to proceed with the course, stating the subjects they wish to offer, and must register either as an intra or extra-mural student each session in which work is taken. For fees of intra-mural students see page 22 , for extra-mural, 60. Extra-mural students in addition to the registration fee must pay a tutorial fee of $\$ 5$ per session for each subject.

## I. Degree of Ph.D.

## Latin.

The Ph.D. course in Latin is a continuation of the Honour work. It comprises a paper in sight translation and composition, a knowledge of Roman History and Literature from 88 B.C. to 37 A.D., a linguistic, critical and exegetic knowledge of certain selected authors, and a course in one of the following:

Comparative Philology, Archæology or Palæography (including Epigraphy). These different branches can be taken at different times according to arrangements.

## Greek.

The Ph.D. work in Greek is a continuation of the Honour course. Papers will be set on selected books and candidates will be tested on translation at sight and Greek prose composition. A knowledge of Greek history in the fifth century B.C., based on the original authorities, Herodotus, Thucydides and Xenophon's Hellenics, I and II, will be required. One of the following subjects is also included:

Comparative Philology.
Archæology.
Palæography (with Epigraphy).
German.
For the degree of Doctor of Philosophy in German there will be required:
I. A general knowledge of the history of the literature.
2. A general knowledge of the history of the language.
3. Accuracy and facility in writing and speaking German.
4. An intimate acquaintance with Gothic, Old High German and Middle High German Texts.
5. An intimate knowledge of the literary works of Lessing, Goethe and Schiller.
6. An intimate knowledge of any representative author of the 19th century since the death of Goethe.
7. A dissertation in German showing originality of treatment.
8. A minute acquaintance of the period within which the dissertation lies.

## Romance Languages.

The Ph.D. work is meant to be a continuation, along broader lines, of the Honour work. Besides the Thesis papers will be set testing the candidate's ability to translate unseen passages and to write French Prose, as well as his knowledge of the following set subjects:
r. The History of French Literature, during any three of the following periods:
(a) Till the end of the 15 th Century.
(b) The Age of Glory.
(c) The I8th Century taken especially in connection with the social and political conditions of the country.
(d) The 19th Century.

2, Certain prescribed authors.
3. The Philology of the Language.
4. Italian or the Comparative Philology of the Romance Languages.
For further information consult the current Calendar and write to Professor Campbell.

English Language and Literature.
Candidates offering this subject will communicate with Prof. Cappon.

## History.

i. The History of England.

Continuous Constitutional History.
Continuous Political History.
A selected Period to be studied in detail from the original authorities.
2. A period of general history to be studied in detail from original authorities.
3. The literature of the special periods selected.

The books on the constitutional history of England to be studied are:-

Stubbs' Constitutional History and Select Charters. Hallam's Constitutional History.
May's Constitutional History.
Periods for detailed study :

English History.
$449-1066$
$1066-\mathrm{I} 272$
1272-I485
1485-1603
1603-1714
1714-1880

General History. 493-1095
1095-1273
1273-1530
1530-1648
1648-1788
1788-1880

Candidates are required to take the special periods most nearly corresponding with each other in English and general history, and in studying the selected periods they are expected to make themselves acquainted with their social and literary history.

Candidates are requested to put themselves in communication with Professor Ferguson, who will prescrite the authorities to be consulted.

> Mental and Moral Philosophy.
> I. General Course.
(A) Philosophical Systems.

Candidates are allowed the following options:

1. They may offer any four of the following books:Plato: Theatetus, Republic, Sophist.

Aristotle: Organon (Selections of Oxford Press), Metaphysics (Selections), De Anima, Nichomachean Ethics, Politics, Poetics.
Kant: Kritik der reinen Vernunft, Kritik der praktischen Vernunft, Kritik der Urtheilskraft.
Hegel: Encyclopädie, I and III, Wissenschaft der Logik, I and III, Phänomenologie des Geistes, Philosophie des Rechts, Philosophie der Religion.
Ability to translate the books offered is presumed.
2. They may offer any two of the above books, together with either $(a)$ the works of any one of the following authors: Rousseau, Comte, Schopenhauer, Lotze, Hartmann, John Stuart Mill, Herbert Spencer, T. H. Green, Henry Sidgwick, or (b) one of the sections under B .
3. They may offer (I) any two of the authors mentioned above in Section $2(a)$, or (2) one of these authors, together with one of the sections under B .
4. Candidates who take the examination for Ph.D. in Latin, Greek, French, German, English, History or Political Science, may offer either (I) any two of the books mentioned above in Section I, or (2) the works of any one of the authors mentioned in Section $2(a)$, or (3) one of the sections under $B$.

Acquaintance with the best recent criticism is in all cases required.

## (B) Principles of Philosophy.

The following branches of Philosophy may form part of the work offered by candidates (See A., Sections 2, 3 and 4) :
I. The principles of logic. References: The logical treatises of Hegel, Mill, Jevons, Venn, Lotze, Sigwart, Bradley and Bosanquet.
2. The Principles of Psychology. References: The
psychological works of James Mill, J. S. Mill, Bain, Wundt, Sully, Ladd, James, Adamson and Lotze.
3. The Principles of Ethics. References: The ethical works of J. S. Mill, Bain, Sidgwick, Green, Bradley, Spencer, Stephen and Martineau.
4. The Principle of Aesthetics. References: The aesthetic treatises of Aristotle, Kant, Schiller, Lessing, Hegel, Lotze, Schasler, and Ruskin.

## Political Science.

Candidates offering this subject will communicate with Professor Shortt.

> The Degree of Ph.D. in Old and New Testament Language and Literature.
I. Candidates must take note that the amount and quality of the work demanded for this degree will, in the judgment of the Faculty, require three years' post- graduate work at the University, or five or six years' extramural work.
2. Candidates must, at an early date in the course of study for the degree, give notice to the Professors of the department concerned of the subject they have selected for a thesis.

## Old Testament Language and Literature.

The candidate will be required to show to the Examiners, by means of critical essays and examination papers, that he possesses comprehensive and accurate knowledge in the following departments:
(1) Languages; Hebrew and Aramaic.
(2) History; the history of Israel to the year I4I B.C. Outline of the history of Egypt and Babylon, in so far as these bear on the history of Israel.
(3) Literature ; the contents and character of the books of the O. T. and of the following books:-Ecclesiasticus, Maccabees, I and II; Esdras, I and II; Baruch, Tobit, the additions to Daniel.
(4) O. T. Theology or history of the Hebrew religion down to I4I B.C.
(5) Criticism, textual, literary and historical. In this department papers will be set on books, or portions of books, representing all classes of Hebrew Literature, historical, poetic, prophetic, etc. The quantity of this work will be arranged with each candidate after consultation with the Professors involved in his course. A list of books and suggestions as to methods of work may be had on application to Prof. W. G. Jordan.

New Testament Language and Literature.
The candidate must give evidence, by means of critical essays and examination papers, that he possesses comprehensive and accurate knowledge in the following departments:
(1) The Language of the Greek New Testament.
(2) History; Jewish and General History from the time of Alexander the Great to the end of the first Century.
(3) Literature ; the Literature of the later Judaism, Palestinian and Alexandrian.
(4) Theology; the Theology of the entire New Testament.
(5) Criticism and Exegesis; Textual, literary and historical criticism. In this Department certain books of the New Testament will be selected for special study.

Candidates will communicate with the Professors for detailed information regarding the books required for Sections I, 3, 4 and 5 .

## II. Degree of D.Sc.

I. Course for the Degree of D.Sc. in Chemistry, Mineralogy, Botany and Geology.
Candidates are required to have a thorough knowledge, practical and theoretical, of the subjects in one of the following divisions:
I. Chemistry-one of the following groups:
A. Inorganic Chemistry.
Chemistry in its relations to Mineralogy.
Inorganic Analysis and Assaying.
B. Organic Chemistry.

Chemistry in its relation to Biology.
Organic Analysis.
C. General Chemistry, including Chemical Theory in relation to Physics.
2. Mineralogy:
(I) Systematic Mineralogy.
(2) Mineralogy in its relation to Chemistry and Geology.
(3) Petrography.
(4) Ore Deposits.
(5) Determinative Mineralogy.
(6) Assaying.
(7) Economic Mineralogy of Canada.

## 3. Biology:

Comparative Anatomy and Physiology, Chemistry of Ferments, Bacteriology, with either of the following groups:
I. (1) Special Studies in Vegetable Histology and Physiology.
(2) A practical acquaintance with the Cryptogamic Flora of Canada.
II. (I) Animal Physiology and Embryology.
(2) Osteology and Odontography of Vertebrates.
(3) Special Study of Invertebrates (Canadian).
(4) Physiological Chemistry.

A thesis containing original work done in one of these subjects.
4. Geology :

Standing equivalent to Preliminary Honours in Chemistry and Mineralogy will be required of candidates in this department.

Either of the following groups may be chosen by a candidate as his chief subject, and he will be required to take the other group as a subordinate subject:
(I) Dynamical Geology and Petrography.
(2) Stratigraphical Geology and Palæontology.

The candidate will be expected to show an acquaintance with his subordinate subject equivalent to Honours in the undergraduate course. An intimate knowledge of the chief subject must be shown.

Detailed information to be obtained from the Professors.

## FACULTY OF THEOLOGY.

## (I) General Announcement.

The course in Theology extends over three sessions of six months each, and embraces the following subjects of study: Apologetics, two sessions, Systematic Theology, Old and New Testament Criticism and Exegesis, Church History, each three sessions; Homiletics and Pastoral Theology, each one session. Junior Hebrew and Senior Hebrew, each one session, for those who have not included them in their Arts course.
2. The student who desires to enter upon the study of Theology must be a graduate of this University or of a University whose degrees are recognized by the Senate; or he must have completed three years of a university course, as enjoined by the General Assembly.
3. Students are expected to have passed the Junior Hebrew class, and are recommended to take a full course in Arts, and to obtain a degree, before entering upon the study of Theology.

An Arts course, as here recognized, must embrace the study of Greek.
4. Students on entering Theology, or on intimating their purpose to study for the ministry, must be in full communion with the Church; and all such students are required, during their course, to be in communion with a congregation of the Church in Kingston.
5. At the beginning of each session each student must present a certificate to the Secretary of the Faculty from the Presbtyery within whose bounds he has resided during the summer vacation; and at the close of each session he shall, at the earliest opportunity, present his certificate
to the Presbytery within whose bounds he purposes to reside.
6. Testamurs in Theology are given to students who have passed the sessional examinations on all the subjects prescribed by the General Assembly for students for the ministry.
7. Pass and B.D. examinations are held annually in April and October, and supplementary examinations only in October.
8. For further information see Blue Book of the Church, or apply to Rev. Dr. Ross, Dean of the Faculty. (2) Matriculation.

Matriculation examinations begin on Thursday, Oct. 25th. Candidates must give notice to the Secretary of the Faculty before Oct. Ioth.
Subjects of Examination
Examination papers will be set in the following de-partments:-
I. The Shorter Catechism and the contents of the Epistles to Galatians and Romans, in English.
2. Acts of the Apostles, I-XII in Greek and Dods' Introduction, 76-151.
3. Hebrew-The Article,, Pronouns, Inseparable Particles, the Qal of Regular Verb, Grammatical Analysis, Ps. I, I Sam. IX. English-Amos I, VII, Hos. I-II, Isaiah I, VI, ViI, Micah I-III, Jordan's Prophetic Ideas and Ideals, pp. 108.
4. The Acts of the Apostles in the R. V., and Bartlet's Early Church History, pp. 1-66.
One paper will be set in each department.

## 1.-SYSTEMATIC THEOLOGY.

Professor-Principal Gordon, D.D., LL.D.
The course in this class extends over three Sessions.
Lectures will be given on:
Christ and the Individual Believer. The Work of Grace.
Christ and the Church. The Means of Grace.
Text-book: Van Oosterzee's Christian Dogmatics. Chapters V and VI.
new testament theology. The Teaching of Paul. Text-book: Stevens' The Theology of the New Testament. Part IV.

Pastoral Theology and Homiletics. In addition to the treatment of this subject by Principal Gordon, a special Course of lectures upon the Office and Work of the Christian Ministry will be given by the Rev. G. M. Milligan, D.D., LL.D.

## HEBREW.

Professor-Rev. W. G. Jordan, B.A., D.D.
Fellow-H. T. Wallace, B.A., B.D.
Junior Hebrew.
Davidson's Hebrew Grammar, the first twenty exercises, the Verb, pp. 162-182.
Psalm I, Genesis I, I Samuel IX-XI.
Senior Hebrew.
Davidson's Grammar, exercises in paragraphs 23 to 38 inclusive, the Irregular Verbs.
Hebrew Syntax; the class lectures. Jonah, Joel and Amos I-V.

## III.-APOLOGETICS.

Professor-Rev. D. Ross, M.A., D.D.
The course in this class extends over two Sessions, and must be taken during either the first and second, or second and third years of the Theological curriculum.

Students who have already taken Honours in Philosophy are exempted from one year's attendance.
I. Lectures on Apologetics from the beginning of the 16 th century.
2. Lectures on Historical Apologetics, and Comparative Religion.
3. Examination of Bruce's Apologetics, Books III and IV. Butler's Analogy, Part I.

## IV.-O. T. CRITICISM EXEGESIS.

Professor-Rev. W. G. Jordan, B.A., D.D.
Exegesis. Selections from Isaiah and Jeremiah.
Criticism. Prophecy and Prophetic Literature.

Honour Course:
Hebrew. Selections from the Book of Job.
Exercises in Davidson's Grammar, 38 to the end.
Daniel, specially the portions in Aramaic.
This course extends over two years.

> V.-N. T. EXEGESIS AND CRITICISM. Professor-Rev. D. Ross, M.A., D.D.

The course in this class extends over three Sessions. Students who have taken first class Honours in Greek are exempted from one year's attendance on the Pass class, but must during that year take the Honour N. T. class.

Selections from the Gospels.
Commentaries: Expositor's Greek Testament. The International Critical Commentaries.
Kenyon's Textual Criticism, Burton's N. T. Moods and Tenses.
Lectures on Introduction and Criticism.

## VI.-CHURCH HISTORY AND HISTORY OF DOGMA.

Professor-John Macnaughton,M.A.
Lectures on Christian Thought and Life in the first three Centuries.

Lectures on the history of research into the Life of Jesus.
Fisher's History of the Reformation.
Honour Course.
Lectures on the Apostolic Fathers, edited by Lightfoot.
Lectures on Gwatkin's Selections from early Christian writers.
Classes open to Theological students who have an elementary knowledge of the German language, are conducted by Professors Macnaughton and Jordan. The text-books for 1907-8 are Spitta's Die Offenbarung des Johannes and Marti's Geschichte der Israelitischen Religion.

## VII.-ENGLISH BIBLE.

Lecturers-Principal Gordon, D.D., Professor Macnaughton, M.A.
The course in this class extends over two Sessions, and is intended to cover the whole Bible.
O. T. Part I. The Pentateuch, early history and histories of the Divided Kingdom down to the time of the writing Prophets. N. T. Part I. The Gospels.

The Church requires the following discourses to be delivered during the course :-Homily, Lecture and Greek Critical Exercise, Sermon and Hebrew Critical Exercise.

> Pass Examination.

On the work of the session.

## Degree of Bachelor of Divinity. <br> Regulations.

I. Candidates for the Degree of Bachelor of Divinity, (B.D.), must be graduates in Arts in this University, or of a University whose degrees are recognized by the Senate, and must follow the prescribed order of classes in Theology.
2. The degree shall not be conferred until the candidate has completed the theological curriculum, with a view to the ministry in the church to which he belongs, and has passed a satisfactory examination in the branches of Theology taught in the University.
3. The divisions of the examinations shall be (i) The Holy Scriptures. Candidates will be expected to show a competent knowledge of the contents of the Old and the New Testaments, and to show special acquaintance with at least one book from the O. T. and one from the N. T. The Revised Version should be used. (2) O. T. Criticism and Introduction, Hebrew and Aramaic, or N. T. Criticism, Exegesis and Introduction. (3) Any one of the following:

> Systematic Theology.

Church History and History of Dogma.
Apologetics and Comparative Religion.

Two papers will be set in (I) and four papers in each of the other divisions.
4. Candidates who have completed the Theological course may be examined in all the subjects, or may defer their examinations in any subject.
5. Students may be admitted to examination in only one division at the end of the second session of their theological course.
6. Students must make 60 per cent. in the Pass examinations of subjects not included in their B.D. course.
7. A candidate may, subject to the preceding regulations, appear at any University examinations in Theology, provided he gives three weeks' notice of his intention to the Registrar and pays the examination fee.

Autumn examinations begin on Thursday, Oct. 24th. Candidates must give notice to the Dean of the Faculty before Oct. 4th.
Subjects of Examination:
I. The Holy Scriptures. The contents of the Old and New

Testaments generally with a special knowledge of Isaiah and St. Mark, in the Revised Version.
Books recommended:
Bennett's Primer of the Bible, or Kautzsch's Outlines of O. T. Literature.

Driver's Isaiah.
Menzies' The Earliest Gospel.
II. Hebrew and Aramaic. O. T. Introduction and Criticism. (a) General Introduction to the O. T. Literature.
(b) Criticism and Exegesis. Parts of the Book of Judges, etc.
(c) Aramaic, The Book of Daniel.

There are two papers in division (b) and one each in (a) and (c). Extra-mural candidates may substitute for (c) Gen. I-IV.
Books to be consulted:
Driver's Introduction, Bacon's Genesis of Genesis, Driver's Genesis. Davidson's Job, Cornill's History of Israel, Dillmann's Genesis, The Oxford Hexateuch, Bradley's. Lectures on Job, Driver's Daniel, MacFayden's Messages of
the Prophetic and Priestly Historians, H. P. Smith's O. T. History, Cheyne's Origin of the Psalter, Gunkel's Legends of Genesis.
Ryle's Ezra, Cambridge Bible, Skinner's Isaiah II, Driver's
Isaiah, Cornill's Prophets of Israel.
Ryle's early Narratives of Genesis.
Duff's Abraham.
MacFayden's Introduction.
Jordan, Prophetic Ideas and Ideals.
III. N. T. Criticism, Exegesis and Introduction.
(a) I. Canonics.

Westcott's History of the Canon of the N. T.
2. Textual Criticism, MSS., Versions and principal disputed passages.
Kenyon's Textual Criticism.
Westcott and Hort, Greek N. T. Introduction.
(b) Introduction, Salmon, Weiss, Gloag, Expositor's Greek Test, Vol. III, pp. 729-754. Vol. IV, pp. 123-148. Bigg's Com., pp. 24-67.
(c) Exegesis, Epp. I. Cor., Gal., I. Peter.

Commentaries: I. Cor., Edwards. Findlay in Expositor's Gr. Test.; Gal. Lightfoot, Ellicott, Expositor's Gr. Test.; I. Peter, Bigg's, International Crit. Com.
(d) N. T. Greek; Burton's Syntax of the Moods and Tenses, pp. 73-129.
Blass' Grammar of N. T. Greek.
IV. Systematic Theology.
(a) The Christian Conception of God; Caird's Fundamental Ideas of Christianity, Van Ooosterzee's Christian Dogmatics, pp. 234-354.
(b) The Christian Doctrine of Sin; Tulloch, Muller Vol. I.
(c) The Atonement; McLeod Campbell, Dale, Lidgett.
(d) The Church; Hatch's Early Organization, Hort's Ecclesia.
V. Church History and History of Dogma.
(a) Church History. Ante Nicene Period; Gwatkin's selections from early Christian writers, and Lightfoot's Apostolic Fathers.
(b) History of Dogma.

The Development of Christian Thought in the first three Centuries.
Books to be consulted:
Neander's Church History, Vols. I, II ; Ramsay's Church in the Roman Empire before A.D. I7o, part II ; Dorner's Doctrine of the Person of Christ, Vol. I; Forrest's Christ of History and Experience; Hooker's Laws of Ecclesiastical Polity, Book V, sections 50-57 ; Allen's Christian Institutions and Unity of Christian Thought.
VI. Apologetics and Comparative Religion.
(a) Philosophical and Historical.

Fraser: Philosophy of Theism. (Gifford Lectures).
Caird's The Evolution of Religion.
Bruce: Apologetics.
(b) Comparative Religion. Grant: The Religions of the World. Menzies: History of Religion.
Benefactors have placed at the disposal of the Principal a few nominations, exempting from payment of class fees throughout the course in Arts, for intending students of Theology who have matriculated. Applications for these should be made to him or to the Registrar before Oct. Ist.

The Stewart bequest of $\$ 5,000$ to the Theological Department will be administered by the Faculty in terms of the will.

## FACULTY OF LAW. DEGREE OF LL.B.

I. This degree will not be conferred upon any undergraduate or upon any graduate in Arts of less than one year's standing.
2. Graduates who have taken the honour courses of this University in History and Political Science may proceed to the degree by passing on the following works:-

Commentaries of Gaius, Abdy and Walker.
Institutes of Justinian. Sandars.
Harris' Principles of Criminal Law. Also Canadian Criminal Code, with amendments.
Maxwell's Interpretation of Statutes. Also Interpretation Acts, in Revised Statutes of Canada and Ontario.
Westlake's Private International Law.
T. A. Walker's International Law.
O. W. Holmes' The Common Law.

Goodnow's Comparative Apministrative Law.
Dicey's Law of the Constitution.
Houston's Constitutional Documents of Canada.
3. Barristers-at-Law or persons who have been admitted as students-at-law by the Law Society of Upper Canada and have passed their second Intermediate Examination will be admitted to the degree by passing on the honour course of this University in History and Political Science, together with the works specified in section 2.
4. Graduates in Arts of this or any recognized University, being Barristers-at-Law, will be admitted to the degree by passing on the following works in addition to those specified in section 2 :-

Bryce's American Commonwealth, Vol. I.
Stubb's Constitutional History of England.
Bagehot's English Constitution.
Bosanquet's Philosophical Theory of the State.
Holland's Elements of Jurisprudence.
Maine's Ancient Law.
5. Candidates are required to send notice to the Registrar, before the first day of March, of their intention to present themselves at any of the examinations.

## FACULTY OF MEDICINE.

The period of study required for the degree of Doctor of Medicine is and always has been four years. Gradu--ates in Arts who have taken in their Arts course the subjects of Physics, Chemistry and Biology, including Physiology and Histology, may complete the Medical curriculum in three years. There are also special courses, in connection with the Arts and Science departments in which the degrees of B.A. and M.D. or B.Sc. and M.D. may be obtained in six years.

## ADMISSION OF STUDENTS.

Candidates for a degree must pass the Medical Matriculation of the University unless (I) they possess a degree in Arts, not being an honorary degree, from any recognized University ; or (2) have already matriculated in Arts in any recognized University ; (3) have passed the Matriculation examination prescribed by the Medical Council of any Province in Canada.

The Matriculation Examination must have been passed before a student will be credited with any of the professional examinations, although lectures may be attended till the beginning of the second year before passing it.

No candidate will be allowed to compete for relative standing, prizes or scholarships, till he has completed the Matriculation Examination.

The Medical Matriculation is the Junior Arts Matriculation, but the optional subjects are not required.

## CURRICULUM.

Undergraduates who are candidates for the degree of M.D., C.M., must complete a period of four years' study, which must comprise four sessions of eight months each.

Regular attendance on full courses of instruction is required in the following departments.

> SUBJECTS OF STUDY.
ist Year:-Physics, Animal Biology, Physiology, Histology, Anatomy, Chemistry, Practical Anatomy, Materia Medica.

2nd Year:-Anatomy, Materia Medica, Practical Pharmacy, Chemistry-Theoretical and Practical, Practical Anatomy, Physiology, Histology, Embryology.

3rd Year:-Practice of Medicine, Clinical Medicine, Therapeutics, Surgery, Clinical Surgery, Obstetrics, Gynæcology and Pædiatrics, Jurisprudence, Pathology, Bacteriology, Medical and Surgical Anatomy.

4th Year :-Practice of Medicine, Clinical Medicine, Surgery, Clinical Surgery, Obstetrics, and Gynæcology, Medical and Surgical Anatomy, Pathology, Mental Diseases, Diseases of the Eye, Ear, Nose and Throat, Sanitary Science.

To meet the requirements of the Medical Council of Ontario and the General Medical Council of Great Britain, a fifth year course has been adopted as follows:

5th Year:-Operative Surgery on the Cadaver, Sectional Anatomy, Clinical Medicine (including Physical Diagnosis), Ophthalmology, Mental Diseases, Clinical Surgery, Diseases of Women, Diseases of Children, Practical Pathology and Bacteriology with spécial attention to the examination of urine, sputum, bile, stomach contents, etc.

The above course of study may have been pursued either wholly at Queen's, or partly at Queen's and partly at some other recognized medical school. In the latter case at least one full session must have been spent at this University.

Certificates of attendance on lectures are accepted from incorporated medical schools in the British Dominions and others recognized by British universities and licensing bodies. Other certificates of attendance on lec-
tures and examinations may be accepted at the discretion of the faculty.

Students who have passed the Senior Leaving examination in Zoology of the Education Department, will not be required to attend lectures on Animal Biology during their first Session.

All students must present certificates of having compounded medicine for a period of six months in the office of a regularly qualified medical practitioner; of having attended at least six cases of midwifery; of having reported six medical and six surgical cases; of having attended and reported on six post-mortem examinations; and of having attended hospital practice for at least twenty-four months, before being permitted to take their final examination.

Graduates in Arts who have attended during their course lectures, or taken practical instruction of the character or duration required by the curriculum in medicine, may obtain certified tickets of the course on payment of the ordinary fee demanded from students in Medicine, less the laboratory fee, paid during their Arts course.

Students in Arts or Science having the study of Medicine in view are recommended to take either of the following courses, as they may thus obtain their B.A. and M..D, or their B.Sc. and M.D. degrees in six years.

Course leading to B.A. and M.D. in six Years.
A.-I. Junior Latin.
$\left.\begin{array}{l}\text { 2. Junior Greek. } \\ \text { 3. Junior French. }\end{array}\right\}$ Any two.
4. Junior German.
B.-I. Junior and Senior English.
2. Junior Philosophy.
3. Junior Mathematics.
C.-I. Junior Physics and Junior Chemistry.
2. Animal Biology and Medical Botany.
3. Junior and Senior Materica Medica.
4. Junior and Senior Anatomy, including Practical Anatomy.
5. Senior Physiology and Histology.
6. Senior Chemistry.
D.-I. Preliminary Honour Chemistry.
2. Preliminary Honour Animal Biology.

Examination on Translation into French or German at the end of the second, third and fourth year.

The degree of B.A. is granted on the completion of the above course which is also equivalent to the completion of the second year in Medicine.

Preliminary Honour Animal Biology, D-1, must be taken at least one session previously to attendance on Senior Physiology and Histology. C.-5; these latter being parts of the final honours.

Course leading to B.Sc. and M.D. in six years.
First Year $\left\{\begin{array}{l}\text { Math. I (8) } \\ \text { Junior English (4) } \\ \text { Physics I (5) } \\ \text { Junior Chemistry (3) } \\ \text { Drawing I (5) } \\ \text { Surveying I (b) (I) } \\ \text { Workshop I (5) }\end{array}\right.$

## EXAMINATIONS AND GRADUATION.

Every candidate intending to appear at the Final examination must, on or before the Ist day of April (in the year in which he proposes to graduate), present to the Secretary a declaration under his own hand that he is twenty-one years of age, or that he will be so before the date of graduation, accompanied by a certificate of good moral character, and a statement of his medical studies, with proper certificates.

Every student must, on or before April Ist, notify the Secretary of the examination upon which he intends to write. For this purpose blank forms are supplied.

## EXAMINATIONS.

Examinations are required at the end of every session as follows:-

At the end of the first session:
Anatomy, Animal Biology and Physiology, Theoretical Chemistry Physics*, Materia Medica.

At the end of the second session:
Anatomy, Physiology, Histology, Materia Medica, and Practical Pharmacy, Chemistry-Theoretical and Analytical.*

At the end of the third session:
Practice of Medicine, Surgery, Therapeutics, Obstetrics, and Pediatrics, Pathology, Jurisprudence, Medical and Surgical Anatomy, Bacteriology.

At the end of the fourth session:
Practice of Medicine, Clinical Medicine, Surgery, Clinical Surgery, Obstetrics, Gynæcology, Medical and Surgical Anatomy, Pathology, Diseases of the Eye, Ear, Nose and Throat, Sanitary Science and Mental Diseases (Optional).
*Examinations on these subjects will be held on Dec. 18th, 1907.

On each senior paper the examiner may put pass and honour questions. Students desiring rank must answer both.

Supplementary examinations will be held in Convocation Hall, commencing September 18th, 1907, at 9 a.m.

Students who desire to take an honour course in Arts, and who have the study of Medicine in view, are advised to take, during their Arts course, the Honour subjects in Animal Biology, and thus complete part of the Practical Anatomy and all of the

Physiology and Histology of their Medical course. An Arts Degree along these lines shortens by one year the course of study required by the Medical Council of Ontario.

## EQUIVALENT EXAMINATIONS.

The following courses and examinations in Arts will be accepted in Medicine:-
I. Attendance on the Preliminary honour course and examination in first year Animal Biology and preliminary honours.
2. Attendance on the honour course and examination in second year Animal Biology, including Histology.
3. Course and examination in Junior Chemistry.
4. Course and examination in Senior Chemistry No. 3, and ist honour No. 2. Arts Calendar.
5. Course and examination in Ist year honour Chemistry Nos. I, 2 and 3.
I. Course and examination in first year Physiology and Animal Biology.
2. Course and examination in second year Physiology and Histology.
3. Course and examination in first year Chemistry.
4. Course and examination in second year Chemistry.
5. Course and examination in Senior Chemistry and in Analytical Chemistry.

## FEES.

Matriculation Fee ..... \$ 500
Registration Fee (for those taking partial courses) Ist yr. 500 Each year thereafter ..... 200
Sessional Fee for each of the first four years ..... 10000The Sessional Fee, including Classes, Registration, Athletics,Library, Examination, Laboratories, and the required amount ofdissection material is $\$ 100$ per session. If not paid in full beforeNov. Ist, \$105.00. Special arrangements will be made with thosewho do not take the full course in any year.
Fifth year ..... $\$ 5000$
Supplemental Examinations (each year) ..... 10 00
Hospital Ticket,-full course, payable with second year fees ..... 2500
Hospital Ticket,-one session ..... 900
Ad eundem statum ..... 1000
Graduation.-M.D., C.M ..... 3000
Exclusive use of Microscope per session ..... 500
B.Sc. and M.D. Course.

First year ......... .............................................. . $\$ 5500$
Second year ......... .......................................... 5500
Third year . ........ .............................................. . . . 6000
Fourth Year 6500
Fifth and sixth years correspond to third and fourth years of M.D. course.

Graduation fees are payable to G. Y. Chown, B.A., Registrar of the University; all other fees to Dr. W. T. Connell, Secretary of the Faculty of Medicine.

The Calendar for the Medical Faculty can be had by applying to Dr. W. T. Connell, Secretary of the Faculty.

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## SCHOOL OF MINING.

## Affiliated to the University.

The object of the School of Mining is to give a theoretical and practical education in all branches of applied science.

The complete course extends over four years and leads to the degree of B.Sc., but diplomas will be awarded to those who complete three years of any one of the courses and pass the necessary examinations.

## Admission.

A candidate may enter upon a course with a view to obtaining a diploma or the degree of B.Sc. upon any one of the following conditions:-

1. Having matriculated in any University in the British Empire or in the United States.
2. Having passed the Junior Leaving or Junior Matriculation Examination of the Department of Education of Ontario or equivalent examinations in any other Province, in English Grammar, Composition and Literature, Arithmetic, Algebra and Geometry, History of Great Britain and Canada, Physics and Chemistry. The matriculation examination may also be taken in Queen's University in September. Other examinations will be accepted, so far as they are equivalent.

Note.-Equivalent examinations in the different Provinces are:-

3. Candidates who offer for matriculation any conditions except (I) or (2) will forward to the Secretary, for the consideration of the Faculty, their applications accompanied by certificates and information.

Students are strongly urged to take the complete Matriculation Examination with the Modern Languages and Science option. (See page 25).

Special students may be admitted to such course of instruction as the Faculty may think proper.
Courses of Study.

The following courses are offered:
I. Three years' course for a diploma. 2. Four years' course for the degree of Bachelor of Science (B.Sc.).
(A) Mining Engineering.
(B) Chemistry and Mineralogy.
(C) Mineralogy and Geology.
(D) Chemical Engineering.
(E) Civil Engineering.
(F) Mechanical Engineering.
(G) Electrical Engineering.
(H) Biology and Public Health.

For further information see Calendar of the School of Mining, which will be forwarded on application to the Secretary, G. Y. Chown, Kingston, Ont.

## EQUIPMENT.

## Chemistry Department.

The John Carruthers Science Hall was built in 1890 for the department of Chemistry.

The practical work in chemistry is carried on in four laboratories: No. I for qualitative analysis, No. 2 for quantitative analysis, No. 3 for experimentation in class, and drill on the subjects treated of in the junior lectures, and No. 5 for organic preparations. No. I and 2 are fitted up with 62 and 42 locked work places, so that 104 students can be provided each with a set of apparatus under lock and key. No. 3 serves both as a laboratory and a class room. It is furnished with seats and desks which are at the same time work tables. Besides these larger laboratories there are smaller rooms devoted to special branches of analytical chemistry and to research.

The assaying laboratory is furnished with the plant necessary for conducting assays of gold, silver, copper, iron, nickel, zinc and lead ores, by furnace, titration and electrolytic methods. With the various furnaces students are taught the use of hard coal, soft coal, coke, gasoline and illuminating gas as fuel. The laboratory is well supplied with ore-bins and samples of pulverized ore from the mining laboratory, so that practice may be had with a variety of ores.

## Physics Department.

The department of physics occupies the southern half of The Ontario Building. The large laboratories and lecture rooms are fitted up in a thoroughly practical way. There are smaller rooms for spectroscopic, photographic
and other special purposes. A consulting library where books are always accessible is a feature of this as well as of the other departments.

## Department of Mineralogy and Geology.

These departments occupy the north half of the Ontario Building, the whole basement of which is furnished as a museum of Economic Mineralogy and Geology.

The mineralogical and crystallographic collections have been carefully made and arranged with a view to their use in teaching the subjects in a practical way. A special feature is the large number of sets of the commoner minerals for the daily use of the students, each of whom keeps his own set throughout the session.

The petrographical laboratory is supplied with electrical power and provided with diamond saws and other apparatus needed in the preparation of thin sections of minerals and rocks for examination with the microscope.

There are provided for the use of the students seven petrographical microscopes of the latest and most improved designs.

Laboratory facilities are also provided for microscopical tests, and for the use of heavy solutions in separating the constituents of the rocks.

The Engineering Department.
The work in engineering is practical as well as theoretical. The new Engineering building contains two laboratories for experimental work in Thermodynamics and Mechanical Engineering, three laboratories for experimental work in Electrical Engineering, a cement testing laboratory, and a laboratory for testing the strength
of materials. In addition to these there is a large draughting room, a research laboratory and a room for surveying instruments.

The college buildings are lighted and heated from a central power plant which is connected with the Engineering building. This plant affords exceptional facilities for practical instruction.

## The Mechanical Laroratory.

The mechanical laboratory consists of two departments, wood-working and metal-working. The woodworking shop is $72 \times 32$ feet and is well lighted on both sides. The appliances are a jig-saw, a circular saw, and three wood-turning lathes, two with four feet beds, and the third with a six foot bed; benches 6 feet and 12 feet long, with accommodation for two persons at each bench, and all the necessary small tools. Students are given rough sketches with dimensions of the work in which they are to engage. They are then required to make working drawings to scale, with all details, and to work from their drawings. Accurate drawings and careful work is insisted upon.

The work for each student begins with dressing wood to size and putting together by various joints. After some skill has been acquired the student is set to making boxes, drawers, simple useful objects, and various kinds of models. In the second term turning is taken up and students are encouraged to make useful articles for themselves, such as small boxes, small table book-cases, mineral cabinets, stands, \&c., the cost for each being merely that of the material put into them.

The metal-working department contains one large room 64 by 16 feet, and two smaller rooms each 32 by 16
feet, besides a private room for the directors. In the large room are three lathes, two drill presses-one large and one small-a shaping machine and a gear-cutting engine for iron wheels, supplied with Brown and Sharp milling cutters. One of the small rooms contains the grindstone, the emery grinders, and a gear-cutting machine with fly cutters for brass and wooden wheels. Both gear cutters are capable of cutting any number whatever of teeth with pitches from 12 to as high as you please, and will take in blanks up to 7 in . diameter. The second small room is used mostly as a model room in which such models as are thought worth preserving are stored. This room contains also a large clock with Dennison's gravity escapement, upon the model of a turret clock, and various working models which are put in motion by moving a switch. The clock supplies time to the building. And it and all the models were wholly constructed in the shops.

In the director's room are a small lathe with slide rest, and a boring machine for drilling the blanks of lantern pinions, and other things of like kind. Two new lathes, a plane with a compound slide rest and a rack feed, and a pittler lathe are in operation.

Ten lessons in blacksmithing are taken by each student during the latter part of his term.

The shops are airy and well warmed and lighted, and neatness, cleanliness and order are insisted upon, so that the shops become an attractive feature of the student's course.

The Mining Laroratory and Ore Testing Works.
The School of Mining has developed from small beginnings a large and comprehensive laboratory, with first-class modern equipment for the practical milling and
dressing of all kinds of ores. With but few exceptions the appliances are of standard sizes, such as are employed in actual practice in large works, so that students may obtain efficient instruction in the adjustment, operation and care of this kind of machinery. An elaborate training is also given in the methods of testing ores for process, in which respect the School of Mining offers peculiar advantages, since many mine owners throughout the Dominion avail themselves of the facilities of this laboratory for working out problems in ore milling and dressing on such a scale as to furnish reliable data for the specification of projected plants.

Thus large quantities of largely different classes of ores are being tested throughout each session, affording students experience of the most valuable sort.

A systematic course of study is carried out, involving comparative investigations into the effects produced upon different ores by varying methods of crushing; hydraulic classification, jigging, buddling, vanning, riffle-washing, etc., etc.

## SOCIETIES AND COMMITTEES.

## ALMA MATER SOCIETY EXECUTIVE.

| Honorary President. . . . . . . . . . . . . Senator Sullivan |  |
| :---: | :---: |
| President | D. R. Cameron |
| 1st Vice-President | C. J. Curtin |
| 2nd Vice-President | M. Matheson |
| Critic. | W. J. Woolsey |
| Secretary ........... . . . . . . . . . . F. Stidwill |  |
| Assistant Secretary |  |
| Treasurer........ ...... . . . . . . . . H. Ma |  |
|  |  |
| Committee | A. P. Menzies |
|  | $\left\{\begin{array}{l}\text { J. A. McCrillivray } \\ \text { W. Hale }\end{array}\right.$ |
| ART | ENCE Y. M. C. A. |
| President . . . . . . . . . . . . . . . . . . . . . M. N. Omond |  |
| Vice-President . . . . . . . . . . . . . . . D. A. McArthur |  |
| Recording-Secretary . . . . . . . . . . . W. A. Dobson |  |
| Corresponding-Secretary. . . . . . . . A. Findlay |  |
| Treasurer. | M. Y. Williams |
| Librarian | H. McKinnon |


| Bible Study.. | P. G. McPherson |
| :---: | :---: |
| Program | M. Matheson |
| Religious Work | J. Allan Donnell |
| Musical | W. A. Beecroft |
| Membership | A. W. Cornett |
| Hand-book | W. R. Rogers |

Y. W.C. A.
Honorary President.............. . Mrs. Matheson
President .... ...... .... . ...... . Miss Macfarlane
Vice-President. . . . . . . . . . . . . . . . . . . Miss McKerracher

Recording-Secretary. ...... ....... Miss Chown
Treasurer. . . . . . . . . . . . . . . . . . . . . Miss Cram
Corresponding-Secretary . . . . . . . . . . Miss Hall
CONVENERS OF COMMITTEES.
Programme
Mies MacKintosh
Bible Study
Miss MacInnes
Missionary
Miss D. A. Macarthy


ARTS SOCIETY.

| Honorary President | f. Callande |
| :---: | :---: |
| President | J. McAskile |
| Vice-President. | G. A. King |
| Secretary | W. W. Kennedy |
| Treasurer | C. Livingstone |
| Auditor. | A. H. Gibson |
| Critic. | R. C. Jackson |
|  | (D. C. Ramsay |
|  | N. S. Macdonnell |
| Committee. | W. D. McIntosh |
|  | C. R. Graham |

## concursus.

Chief Justice
Junior Judge
Senior Prosecuting Attorney.
Sheriff
Clerk
Chief of Police
Junior Prosecuting Attorney. . . . . . J. J. G. McCammon
Crier
J. M. Simpson


OFFICERS OF AESCULAPIAN SOCIETY.
Honorary President. . . . . . . . . . . . . G. W. Mylks, M.D.
President . . . . . . . . . . . . . . . . . . . . . J. P. McNamara
Vice-President
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C. W. Burns

Treasurer
N. J. McKinley
G. A. Greaves

Committee $\left\{\begin{array}{l}4 \text { th year................ H. H. Milburn } \\ 3 \text { rd }\end{array}\right.$ $\begin{cases}\text { 3rd } \\ \text { 2nd } & \text { " }\end{cases}$ Ist ، .... ...........H, Mohan

## MEDICAL CONCURSUS INIQUITATIS ET VIRTUTIS.




## RUGBY FOOTBALL CLUB.

| Honorary President. | Prof. W. Nicol |
| :---: | :---: |
| President | W. D. Kennedy |
| Vice-President. | A. Turner |
| Sec.-Treasurer. | J. C. Byers |
| Asst. Sec.-Treasurer | T. McGinnis |
| Capt. ist XIV | K. V. Williams |
| Capt. 2nd XIV . | E. L. Pennock |

## ASSOCIATION FOOTBALL CLUB.

Honorary President.

Prof. Matheson

President . . . . . . . . . . . . . . . . . . . . . . J. E. Carmichael
Vice-President. . . . . . . . . . . . . . . . . . .H. Fleming
Secretary. . . . . . . . . . . . . . . . . . . . . . . Alex Hope
Captain.
H. E. Chatham

Committee. $\left\{\begin{array}{l}\text { Science } \ldots . . . . . . \text { K. S. Clarke } \\ \text { Arts ................ C. Caverley } \\ \text { Medicine............ Mohan }\end{array}\right.$

## HOCKEY CLUB.

| Honorary President | Prof. W. T. Connell |
| :---: | :---: |
| President | Prof. M. B. Baker |
| Vice-President | G. T. Richardson |
| Sec'y.-Treasurer. | R. M. Mills |
| Asst. Sec'y.-Treasu | F. Brewster |
| Captain ıst Team | H. W. Macdonnell |
| Captain 2nd Team | E. L. Pennock |

QUEEN'S UNIVERSITY JOURNAL.


Ladies DEPARTMENTS:
\{ Miss M. Clifford Miss I. McInnis
Arts. . . . . . . . . . . . . . . . . . . . . . . . . . J. M. Macgillivray
Literary.............................. A. H. Gibson
Medicine
R. A. Scott, B.A.

Alumni
A. E. Boak

Science


## BASKET BALL CLUB.

Honorary President. . . . . . . . . . . . Prof. Matheson
President. . . . . . . . . . . . . . . . . . . . . . . Praig. Pringle
Vice-President. . . . . . . . . . . . . . . . . S. Saint
Sec.-Treasurer. . . . . . . . . . . . . . . Flemming .

## TENNIS CLUB.



MALE ${ }^{\text {anden }}$ CLUB.

| Honorary President. | Prof. Campbell |
| :---: | :---: |
| President. | J. M. Simpson |
| Vice-President. | L. A. Barnum |
| Sec.-Treasurer | F. H. Huff |
| Arts | R. Gray |
| Committee.. $\left\{\begin{array}{l}\text { Scienc }\end{array}\right.$ | L. N. Armstrong <br> W. H. Cole |

## MANDOLIN CLUB.



## DRAMATIC CLUB.



## PHILOSOPHICAL SOCIETY.

Honorary President . . . . . . . . . . . . . Dr. W. G. Jordan
President. . . . . . . . . . . . . . . . . . . . . . . . Mr. J. S. Nicol
Vice-President. . . . . . . . . . . . . . . . . . Mr. R. J. MacDonald
Sec.-Treasurer. . . . . . . . . . . . . . . . . . . . Mr. R. C. Jackson
POLITICAL SCIENCE AND DEBATING CLUB.
Honorary President.
President.
Prof. Shortt
D. A. McArthur

Vice.-President....... . . . . . . . . . . . J. J. M. McGillivary
Sec.-Treasurer.............. . . . . . . G. L. Fraser
Critic
O. D. Skelton, M.A.

Committee. $\left\{\begin{array}{l}\text { Arts..... } \\ \text { Medicine } \\ \text { Science } .\end{array}\right.$
D. L. MacKay
J. H. Stead, M.A.
W. J. Woolsey

PART II.

## PART II.

MEDALS, PRIZES AND SCHOLARSHIPS FOR 1906-1907.

| UNIVERSITY MEDALS. |  |
| :---: | :---: |
| Latin | Graham, C. R., Arnprior. |
| Greek | Boak, A. E., M.A., Kingston. |
| German | Wilson, A., B.A., Warkworth. |
| French | Arthur, Leona M., Consecon. |
| English | McDonald, R. J., M.A., Golspie. |
| History | Alford, Ethel, B.A., Brockville. |
| Moral Philosophy | Thompson, B. W., Ottawa. |
| Mental Philosophy | Ramsey, D. C., B.A., Grand Valley. |
| Political Science | McArthur, D. A., B.A., Dutton. |
| Mathematics | Dwyer, W. O., M.A., Kingston. |
| Physic's | Cornell, M. L., Carleton Place. |
| Botany | Easson, R. E., Stratford. |
| Animal Biology | Gibson, J. W., Kars. |
| Chemistry | Bowen, N. L., M.A., Kingston. |
| Mincralogy | Bowen, N. L., M.A., Kingston. |
| Gcology | Schofield, S. J., M.A., Kingston. |

## UNIVERSITY PRIZES-ARTS.

Latin Prose Composition...... Graham, C. R., Arnprior.
Greek Prose Composition....... Boak, A. E., M.A., Kingston.
Roughton Prize in German. . . Girdler, Winifred, Kingston.
Professor's Prize in French.... Girdler, Winifred, Kingston.
Rogers Prize in English...... Patton, M. J., Windham Centre.
Lezeis .......................... Dunn, J., Kingston.
McLennan Prize in Hebrew...Dobson, W. A., Picton.
Gozvan Foundation in Botany..Anderson, J. A., Rossmore.
Gozvan Foundation (Political
Science
Calvin, in Latin
McArthur, D. A., Dutton.
Maclennan, in Greek
Gozean Foundation No. III.... McArthur, D. A., B.A.., Dutton.

## MEDICAL PRIZES.

Faculty Prizes in Anatomy....Thompson, H. R., Morristown, N. Y., ist year prize ; Hutton, J. B., Kingston, and year prize.
Faculty Prize for General Pro-
ficiency in 2nd year, value $\$ 25$. Galbraith, J. E., Arnott.
N. Y. Alumnae Association Scholarship, value $\$ 50$ Wallace, W. G., Metcalfe. Materia Medica Class Prize... MacKinnon, M. C., Whim Road Cross, P.E.I.
Dean Fowler Scholarship for General Proficiency, third year, value $\$ 50$. . ............ Cotman, I. D., Pembroke.
Pathology Class Prize, thirdyearUsher, W. C., M.A., Wicklow.
Chancellor's Scholarship for
General Proficiency through-out course, value $\$ 70 . . .$. ...Quigley, J. P., M.A., Kingston.
University Medal in Medicine.. Boyce, H. A., Murray.
University Medal in Surgery. Quigley, J. P., M.A., Kingston.
\$25 Prize in Mental Diseasesgiven by Dr. Barber..........Bennett, A. E. H., Vancouver,B.C.
Recommended for House Sur-
geoncies at Gencral Hospital.
Boyce, H. A., Murray.
Trousdale, F. H., Hartington.
Next in order:
McNamara, J. P., Stratford.
Spankie, A. T., Wolfe Island.Paul, R. D., Selby.
Walker, M. J. O., Kingston.
Mills, R. M., Kingston.
Class Prize for Physical Diag- nosis, third year. Sargent, F. R., Kingston.
UNIVERSITY SCHOLARSHIPS.
1.-Arts.
matriculation, 1906.
Junior.
Nicholls Foundation. No. 2,
Gencral Proficicncy, \$135....Meagher, N. J., Ottawa.Kingston, General Proficiency,
\$125. MacKay, E. G., Hamilton.Nicholls Foundation No. 3,
General Proficiency, \$120....Newton, Margery, Hamilton.Maclennan Glengarry Founda-tion, Candidates of Countyof Glengarry, $\$ 340 . . . . . .$. . Clarke, W. C., Williamstown.Senior.
McLachlan, Latin, French and English, \$225 Girdler, Winifred A. M, King- ston, with honour of Nicholls Found. No. 1.
Prince of Wales, Mathematics,Chemistry and Physics, \$160. Warwick, R. W., Smith's Falls,with honour of Mowat.
Governor - General, Classics,\$175 ............................ Macdonnell, Mary L., Kingston.
Chancellor, Mathematics, \$200. Pounder, J. R., Pembroke, withhonour of Prince of Wales.
Mackerras Memorial, Classics, \$170 Marshall, Mabel, Kingston.
Williamson, No. I, English and History, \$165 ................ Cooper, Roberta M., Port Hope.
Williamson, No. 2, French andGerman, \$160 ................ Robertson, Mary G., CarletonPlace, with honour of Mayor.
Leitch Memorial No. I, Eng- lish, Chemistry and Physics or Botany, \$160 ............. Miller, N., Aylmer.
Nicholls Foundation No. I,English, French and German,\$150 ........................... Phillips, Laura M., Fergus.
Mayor, Latin, French and Ger-
man, \$150 Raitt, Helena G., Ottawa.
Mowat, Mathematics, \$150....Sillers, Roberta, Walkerton.
Forbes McHardy, Mathema-tics, French and German....Stock, V. F., Stratford.Watkins, to student of King-ston Collegiate Institutestanding highest in Form IVexaminationsShortt, Muriel, Kingston.
II.-ARTS AND PRACTICAL SCIENCE SESSIONAL.
Chancellor's Scholarship, FirstYear in Practical Science...Bell, W. A., St. Thomas.Mayor Mowat's Scholarship,Second Year in Practical
Science Campbell, W. W., Dutton, andKelso, J. A.,Walalceburg, equal.
Bruce Carruthers' Scholarship, Third Year in Mining. Rockwell, D. B., Duluth, Minn., and Orford, C., Kingston, enual.

## 1II.-THEOLOGY.

A. MATRICULATION.
B. SESSIONAL.
Sarah . McClelland Waddell, Memorial, \$120 McDonald, R. J., Golspie.
The Chancellor's, \$70 McDonald, J., B.A., Deseronto.Spence (tenable two years),\$60Nicol, J. L., Jarvis.
Anderson, No. I, \$40 Jackson, R. C., Pictou, N.S.
Anderson, No. 2, \$35 Brydon, R., M.A., Oustic.
The Tavese, $\$ 40$ Barnard, A. T., B.A., Hamilton.
Toronto, \$60 Omond, M. N., London, and Cor-nett, A. D., Kingston.
St. Andrew's Church, Toronto,\$45Brown, G. A., B.A., Oak Grove.
Rankine, No. 1, \$45 Tod, A. S., B.A., Maguire.
Rankine, No. 2, \$45 Jewitt, T. J., B.A., Campbell'sCrossing.
Glass Memorial, \$30 Ferguson, W., B.A., Snow Road. Anderson, \$25 McCuaig, W. D., B.A., Dalston.
Morris, \$50 McInnis, W. H., B.D., Vankleek Hill.
The Robert Laird Prize in Elo- cution (six volumes Inter- national Crÿtical Comment- ary)Stevenson, R. M., B.A., Ridge-town.
The Dr. McTavish Prize in Elocution, \$1o. Brown, G. A., B.A., Oak Grove.

## LIST OF GRADUATES FOR 1906-1907.

DOCTOR OF SCIENCE (D.SC.)

Firth, Wm. P., M.A.
Toronto. MASTER OF ARTS (M.A.)
Barnard, A. T Lancaster, N.Y.
Boak, A. E Kingston.
Bowen, N. L. . . . . . . . . . . . . . . . . . . . . . . . . . . . Kingston.
Brown, G. A Admaston.
Clifford, Margaret
Conroy.
Cornell, N. L. Carleton Place.
Dwyer, W. O.. Kingston.
McDonald, R. J Golspie.
Mackintosh, Helen . . . . . . . . . . . . . . . . . . . Madoc.
Nicol, J. L........... . . . . . . . . . . . . . . . . . . . . Jarvis.
Ramsay, D. C................................. Grand Valley.

Turner, N. L. . . . . . . . . . . . . . . . . . . . . . . . . . . Hamilton.

| Alford, Ethel. | Brockville. |
| :---: | :---: |
| Anglin, Jennie M. | Kingston. |
| Ashman, G. H | Ottawa. |
| Barker, John | Leduc, Alta. |
| Bland, C. H | Pembroke. |
| Branion, S. J. A | Wolseley, Sask. |
| Burchill, A. M. | Bolton. |
| Chapman, W. F | Toronto. |
| Clarke, T. E | Ottawa. |
| Clugston, J. F | Epping. |
| Cornett, A. D | Kingston. |
| Cornett, W. F. | Kingston. |
| Cowles, J. P | Hamilton. |
| Crawford, C. M | Kingston. |
| Dingwall, R. | Cornwall. |
| Doherty, F. | Belfast, Ireland. |
| Carmichael, D. A | Unionville. |
| Downey, R. F | Port Perry |
| Dunlop, Florence | Kingston. |
| Edwards, J. J. | Burritt's Rapids. |
| Ellis, D. E. | Kingston. |
| Elliott, Emily M | Agincourt. |
| Feasby, W. | Toronto. |
| Ferguson, J. D | Prospect. |
| Ferguson, J. J | Kingston. |
| Foley, D. E. | Kingston. |
| Foster, Jess | Welland. |
| Fraser, D. J. | Whitby. |
| Goodfellow, T. | Parham. |
| Grass, Margaret | Kingston. |
| Grover, J. I. | Kingston. |
| Haughton, C | Hemmingford, Que. |
| Houser, W. H | Canboro. |
| Huff, J. S | Meaford. |
| Ide, William | Ottawa. |
| Joyce, C. E. | Bronte. |
| Laing, A. | Baltimore. |
| Livingston, C. W | Kingston. |
| Low, Constance M | Ottawa. |
| Lynd, L. E | Fennells. |
| Matheson, M. | Armow. |
| Milliken, J. B. | strathroy. |
| Mills, Frances B | Kingston. |
| MacArthur, Annie | Washburn. |
| McArthur, D. A | Dutton. |
| McAskile, J. | Highgate. |
| McCallum, J. | Brewer's Mills. |
| McEachern, J. G | Stayner. |

Alford, Ethel Brockville.

Ashman, G. H Ottawa.
Barker, John Leduc, AltaBranion, S. J. AWolseley, Sask.Chapman, W. FToronto.Clugston, J. FEpping.
Cornett, A. DKingston.
Cowles, J. PKingston.
Dingwall, RBelfast, Ireland.
Carmichael, D. APort Perry
Dunlop, Florence MBurritt's Rapids.
Ellis, D. EAgincourt.
Feasby, W. JProspect.
Ferguson, J. J.Kingston.
Foster, Jessie.
Whitby.
Goodfellow, T. JKingston.
Grover, J. I Kingston.
Houser, W. H Canboro.Ide, WilliamOttawa.
Joyce, C. E Bronte.Livingston, C. WKingston.
Low, Constance MFennells.
Matheson, Mstrathroy.
Mills, Frances BWashburn.
McArthur, D. AHighgate.
McCallum, J. F.Stayner
MacFarlane, Annie S Franktown.
McGlennon, A. C. Colborne.MacKay, Minnie BSmith's Falls.
McKeracher, Donalda M Dutton.
MacKinnon, G. WRevelstoke, B.C.
McRae, Caroline J Perth.
Ockley, Beatrice A. Kingston.
Urr, W. J Kingston.
Poole, Edna. Poole's Resort.
Rafter, R Arthur.
Reed, A. L Barbadoes.
Reid, Jean G Renfrew.
Rhoades, H. G. Hamilton.
Rielly, F. V Kingston.
Robb, D Battersea.
Scott, Carrie L. Napanee.
Smart, R. S Ottawa.
Spencer, Amy Sault Ste. Marie.
Spotswood, Edna Riceville.
Stewart, Lily D Waba.
Stillwell, G. B Meaford.
Stott, W New Westminster, B.C.
Urquhart, J. RWalker, A. J
St. Thomas.
White, H. T Stratford.
Whitehead, J. Rosemount.
GRadUates-in medicine (m.d.) and masters of SURGERy (C.m.)
Asselstine, Bert Wilton.
Bennett, Allan Edward Hingston Vancouver, B.C.
Bowen, Herbert McGregor Gananoque.
Boyce, Harry A Murray.
Brown, John Elliott Kingston, Jamaica.
Burke, Martin Luther.Casselman, Simon BismarckNorth Williamsburg.
Curphey, Aldington George. Kingston, Jamaica.
Donevan, Frederick James Gananoque.
Greaves, George Aldon Kingston.
Johnston, Arthur Clifford Kingston.
Kean, Samuel Garfield. Broòkfield, Nfld.
Keeley, Frank J. Railton.
Laidlaw, Campbell, B.A. Georgetown.
Longmore, Howard Bruce, B.A Camden East.
Mills, R. MMcCormick, Albert MowatOttawa.
McDonald, Angus. Scotch Line.
McDougald, Wilfrid Laurier Cornwall.
McNamara, James Patrick. Stratford.
Paul, Robert Dorland ..... Selby.
Quigley, Joseph Paterson, M.A ..... Kingston.
Scott, Robert Andrew, B.A Walkerton.
Spankie, Arthur Tipper. Wolfe Island.
Spence, Harold Douglas Livingstone, B.A Kingston.Storey, Gilbert ErwinEvarts, Alta.
Sullivan, John Herbert Peterboro.
Trousdale, Frederick Harry Harrington.
Walker, Melvin James Oagle Kingston.Wightman, RobertLancaster.
BACHELOR OF SCIENCE (B.SC.)
In Mining Engineering.
Akins, J. R. Kinburn.
Alder, W. R. Prescott.
Bartlett, James Gananoque.Curtin, C. J., B.ABrockville.
Houston, D. W Omaha, Neb.
Irwin, R. T Norwich
Matheson, H Armow.
Murray, C. W Mission City.
McEwen, D. F Dawson, Yukon.
McKay, G. J Owen Sound.
McLaren, G. R. Perth.
Sands, J. M. Kingston.Woolsey, W. J.Phoenix, B.C.
In Civil Engineering.
Calvin, J. D., B.A. Kingston.
Campbell, A. S. Lashburn, Sask.
Herriot, G. H Souris, Man.Jenkins, W. E.Orwell, P.E.I.
Kilburn, D. G. Stratford.
King, J. L Fairfax, Man.
Lavoie, E. Baie-St. Paul, Que.Lazier, F. SBelleville.Malcolm, L.Stratford.
MacArthur, F Gore Bay.McCulloch. R. OSours, Man.
Peppard, H. M Springhill, N.S.Potter, R
Kingston.Rogers, W. R
Thorndale.Wright, G. C.Kingston.
In Mechanical Engineering.
Keith, G. C. Smith's Falls.
In Electrical Engineering.
Code, E. S. L Kingston.
German, H. A Kingston.Mackenzie, H. AMoulinette.
Stiles, L. PCornwall.

DIPLOMA IN CIVIL ENGINEERING.
Keith, G. C Smith's Falls.
Milliken, John B StrathroyRice, E. W................................ Perth
Mining engineer (m.e.)
Strachan, B. O., B.Sc Ely, Minn.
bachelor of divinity (b.d.)
Brown, G. A., B.A Oak Grove.
Lindsay, M. A. F ..... Arkona
Munro, M. F., B.A Lancaster.
MacKinnon, A. G., B.A Oak River, Man.
Smith, J. E., B.A. Menie.
Stevenson, R. M., B.A Ridgeway.Watt, W. J., B.A.......................... Walkerton.
Testamurs in Theology.
Beveridge, R., B.A Port Elmsley. Brown, G. A., B.A. Uak Grove.
Marshall, D. H., B.A Campden.
Stevenson, R. M., B.A Ridgeway.
Stewart, D. J ..... Waba.
Watt, W. J., B.A. Walkerton.
doctor of laws (Ll.d.)
Miller, W. G., B.A Toronto.

## PASS LISTS.

## , ARTS.

I. SUPPLEMENTAL EXAMINATIONS, SEPTEMBER, 1906.

Junior Latin.-Mt. Carmel, Sister; Steele, M. Gertrude; Lioba, Sister; Marguerite, Sister; Angela, Sister ; Fraser, Clarke R. ; Hortense, Sister; Eyre, B.; Klugh, A. B.; Stirling, J. B.; Parker, H. R.
Senior Latin.-Rhoades, H. G.; Hughes, F. J., and Spotswood, Edna, equal; Alford, Ethel ; Feasby, W. J.; Clarke, T. E.; Gibson, A. H. ; Barker, J.; Compton, Edith; Rafter, R.; Edwards, J. J.; Joyce, C. E.
Junior Greek.-Foster, Duncan E.; Hall, W. T.; McEachern, J. G. ; McRae, A. R.; Walker, A. J.; Beggs, W.; Eyre, B.; Hamilton, J. R.; Nichol, T. L.; Gray, A. A.
Senior Greek.-Downey, R. F.; Rhoades, H. G.
Junior Greek.-Bowers, Annie M.; Turner, N. L.; Stillwell, J. J.; Elliott, Gertrude.

Senior German.-Hampson, E. ; Dobbie, J. A.; McNabb, J.; Ellis, Mima A.
Junior French.-Hortense, Sister M.; Ashe, Cecilia T.; Lioba, Sister M. ; Denny, J. D.; McGlennon, A. C.; Butler, Rose M. E. ; Anderson, J. A. ; Shirreff, W. T.; Joyce, C. E.

Senior French.-Lawrence, C. W.; Rhoades ,H. G.; Foley, D.E.; Kirkpatrick, W. H.; Taylor, May M.; Lake, Ethel M:; Abbott, Muriel E.
Sciontific French, 4 th Year.-Sprague, W. E.; Cornett, W. F.
Junior English—Jandrew, W.; Alberta, Sister M.; Wilson, Mabel A.; Aiton, Agnes; Kennedv. WV. W.; Wilson, Dorothy; McArthur, F. T.; Kendrick, G. B.; George, W. B.; Haycock, Margaret; Lowe, G. S.; Birkett, E. H.; Drury, C. W.; Barker, E. A.
Senior English.-Ellis, Mima A.; Flynn, A.; Matthews, Jessie; Brunton, W. D. ; McRae, A. R. ; Kirkpatrick, W. H. ; Taylor, May M. ; Hooper, C. H. ; Bolton, C. W.; Ellis, R. J.; Stillwell, J. J.; Anglin, R. W.; Valens, G. C.; Chandler, Pearl E.; Gray, A. A.; Nesbitt, Mabel E. ; Salisbury, C. C.

Mediaeval History.-Crawford, C. M.; Lioba, Sister M.; Morton, Marion ; skene, S. ; Hortense, Sister ; Reid, Jean: Bolton, C. W.; Wilson, Mabel ; Burchill, A. M. ; Ellis, Mima ; Powell, Essie.
English Constitutional History.-Bolton, C. W.; Voaden, A.; McMichael, Mary; Wilson, Dorothy.
mental Philosophy.-Stillwell, G. W.; McCrac, J. D.; Parker, Hugh A.; Matthews, Jessie E.; MacKay, Minnie B.; Hofferd, u. W.; Ockley, Beatrice; Reynolds, B. C.; Taggart,
B. C. ; McNabb, J.; Lake, Ethel M. ; Joyce, C. E. ; Steele, Gertrude M. ; Compton, Edith; Haycock, Margaret; Lambert, Beatrice; Ferguson, J. J.
Moral Philosophy.-Stewart, C. H.; Lawrence, C. W.; Cowles, J. P.; Edwards, J. J.; Flynn, A.; Ferguson, J. J.; Stewart, G. B. ; Hendry, Annie S. ; Kerr, T. R.

Economics.-Hughes, F. J.; Parker, H. R. ; Smart, R. S.; Ide, W.; Skene, S. D.; Foley, D. E. ; McIntosh, C. R. ; McCrae, J. D.; Cook, W. J.

Politics.-Caverley, D. C.; Hughes, F. J.; Ide, W.; McIntyre, N. C. ; MacIntosh, C. R.; Rafter, R.

Junior Mathematics.-Steele, Gertrude Mi.; Ashe, Cecilia T.; Butler, Rose M. E.; McCrae, J. D.; Mt. Carmel, Sister; Johnson, G. M.; Fraser, R. C.; Angela, Sister M.
Senior Mathematics.-Grover, J. I.
Junior Physics.-Edwards, J. J.; Evans, J. J.; Hamilton, J. R. Senior Physics.-Cowles, J. P.; Froats, J.; Stewart, G. B. ; Steele, M. Gertrude ; Joyce, C. E.; Taggart, B. C.

Junior Chemistry.-Edwards, J. J.; Steele, M. Gertrude; Cowles, J. P.; McMichael, Mary ; Ellis, Mima A.

Senior Chemistry.-Orr, W. J.; Burchill, A. M.; Bennett, W. P. Pass Animal Biology-Clarke, H. M. ; Orr, W. J.; Macintyre, N. C. ; MacIntosh, C. R.

Pass Botany.-Aiton, Agnes; Bowers, Annie M.; Burwell, Bertha E.; Ashe, Cecilia T.; McConkey, Eva; Hooper, C. H.; Butler, Rose M. E. ; Best, H. H.
Elementary Mineralogy and Blozupipe Analysis.-Froats, J.
Pass Geology.-Denny, J. D.; Dempster, H.; Flynn, A. ; Hamilton, J. R. ; Cordukes, J. P.

## 2. SESSIONAL EXAMINATIONS.

PASS LISTS, APRIL, 1907.
Junior Latin.-Div. I, Clark, W. C.; Hewton, Marion; Harris, A. L. ; Macdonald, J. A.; Neish, W. G. ; Elliott, Jennie; Hooper, J. C. Div. II, Walsh, T. M.; Anglin, Mary; Cormack, S. S.; McEachern, E. C.; Branion, S. J. A.; Gray, J. R.; Gardiner, W. H. ; Orok, W. Fred; Chisholm, H. A.; MacMillan, John D.; Wylie, E. B. ; Reid, Jas. R.; Reid, Georgina; Wilkie, Jean C.; Mills, A. L. S.; Jordan, Ethel. Div. III, Macdonald, Frank L.; Nicolle, Laura; Dupuis, E.; Russel, C. S. ; Murray, G. M.; Hague, Hilda L.; Walkom, D. T.; Bailey, Etta; Detweiler, John; Macdonald, Geo. E.; MacKnight, T.; Day, C. W.; Gilbert, A. V.; Plews, T. V.; Robertson, Helen; Losee, W. H.; Urie, G. N.; Smart, R. S.;

Truesdell, A. W.; Henderson, Henrietta S:; Dunn, J.; Wilkie, Ada; Copeland, G. E.; Benson, J. E. ; Stewart, Margaret E.; Kinsella, M. D. B.; Lord, A. R.; Alberta, Sister M. ; Anderson, Leslie R.; McIlroy, Eliz.; McKenzie, A. J.; Shirreff, W. T.; Kennedy, W. W.; Turner, A. B. ; Simpson, J. M. ; Turner, N. L. ; Day, R. C.

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Intermediate Honour French.-Class II, Fuller, E. F.; Keefe, R. D.

Final Honour French.-Class I, Arthur, Leona M. Class II, Wilson, A.; Alford, Ethel ; Poole, Edna M., Hanna, E., equal; Feasby, W. J. Class III, O'Connell, Marguerite E.; Reid, Jean G. ; Scott, Carrie L. ; Macfarlane, Annie S. ; Ockley, Beatrice; Mackenzie, Winewood F.; MacArthur, Annie, Hughes, Ada, equal.
Preliminary Honour English (Anglo-Saxon).-Class I, Black, H. J.; Caverley, D. C. Class II, Stewart, Annie J.; MacFarlane, Christina; Keys, S. J. Class III., Clifford, Margaret; Gray, J. R.; Ross, Ethel C. ; Stevens, R. S. ; Dobson, W. A.; McEachern, J. G.; O'Donnell, Florence; Wilson, G. H.
Intermediate Honour English.-Class I, Bland, C. H. Class II, none. Class III, Stott, W.; Compton, Edna; Rafter, R.; Millar, Edna A.; Mills, Frances; McPherson, P. G.
Final Honour English.-Class I, McDonald, R. J.; Baird, A. W.; Clifford, Margaret. Class II, Poole, Edna; McCrae, Caroline; Dunlop, Florence M. ; Elliott, Emily M. Class III, Lindsay, Muriel; Low, Constance M.; Matheson, M. ; Beecroft, A.; Anglin, Jennie M.; MacFarlane, Annie S.

Preliminary Honour History.-Class II, Lindsay, Muriel ; Stewart, Annie; Rafter, R. A. Class III, Spotswood, Edna; Chandler, Pearl; Buchanan, J. A.; Kirkpatrick, W. H.
Final Honour History.-Class I, Ethel Alford; Ferguson, J. J.; Meldrum, G. E., Clifford, Margaret, equal. Class III, Hiscock, May; Crawford, Pearl.
Honour Philosophy, Preliminarv.-Class I, Shaver, J. A. Class II, Rafter R. Class III, McGlennon, A. C.; McAskile, J.; Marshall, D. H.
Honour Philosophy, Final.-Class I, Thompson, B. W.; Ramsay, D. C. Class II, Shaver, J. M. Class III, Laing, A.

Honour Philosophy, (Partial Course).-Class I,McDonald, R. J.; Barnard, A. T. Class III, Laing, A.
Political Science, Preliminary Honours.-Class I, Bland, C. H.; MacInnes, G. L. Class II, Code, S. W. A.
Political Science, Final Honours.-Class I, McArthur, D. A. Class II, McCallum, J. F. ; McGillivray, J. M. ; Deutschman, F. H. Class III, Brown, A. H.

Preliminary Honours, Mathematics.-Skirrow, W. A.; Warwick, R. W.; Warren, P.; Shaw, D. W.; Bothwell, N. D., Paul, C. A., equal ; McRae, J. A.; Doxsee, W. W.; Wallace, F. D.; Weir, W. J.
Second Honour Group, Synthetic Solid Gcometry.-Macdonnell, A. D. ; Ralston, G. D.; Kingston, H. R.; Fraser, D. J.; Henry, S. H.: Pomeroy, J. C.
Calculus I.-Macdonnell, A. D.; Kingston, H. R. ; Whitehead, J.; Henry, S. H. ; Ralston, G. D. ; Fraser, D. J.; Wright, R
Spheric Trigonometry.-Macdonnell, A. D.; Kingston, H. R.; Ralston, G. D.; Henry, S. H.; Fraser, D. J.
Final Honours.-Class I, Dwyer, W. O. Class II, Ellis, D.; Houser, W. H. Class III, Whitehead, J.
Preliminary Honour Physics.-Class I, Kingston, H. R. ; Fraser, D. J. Class II, Ralston, G. D.; Paul, C. A.; Macdonnell, A. D.

Physics, Final Honour.-Class I, Cornell, M. L. Class II, Pomeroy, J. C.
Experimental Honour Physics.-Class I, Stillwell, G. B.; McMillan, G. ; Ferguson, W. P.
Preliminary Honour Botany.-Class I, Stillwell, G. B.; Tuck, J. R. ; White, H. T.; Hooper, J. C.; Anderson, J. A. Class II, Joyce, C. E.
Final Honour Botany.-Class I, Easson, R. E.; Froats, James; Forrester, J. W.
Preliminary Honour Animal Biology.-Class I, Ferguson, W. P.; White, H. T.; Stillwell, Geo.; Tuck, J. R.; Bow, M. R. Class II, Forrester, J. W.; Lane, D. J. Class III, Joyce, C. E.; Shaw, J. G.; Gardiner, J. N.; Lipman, A.

Final Honour Animal Biology.-Class I, Gibson, J. W.; Carmichael, D. A. Class II, Froats, J. Class III, Houston, J. A.

Preliminary Honour Chemistry.-Class I, McMillan, G.; Henry, S. H.; Stillwell, G. B. ; Easson, R. C.; Forrester, J. W.; Lipman, H. Class II, Carmichael, D. A.; Gardiner, J. N.; Anderson, J. A.; Bow, M. R. Class III, Houston, J. A.; Campbell, W. M.
Final Honour Chemistry.-Class I, Bowen, N. L.; Turner, N. L. Preliminary Honour Mineralogy.-Class II, Campbell, W. M.
Final Honour Mineralogy.-Class I, Bowen, N. L.; Turner, N. L.; Schofield, S. J.

Preliminary Honour Gcology.-Class I, Bowen, N. L. ; Schofield, S. J. Class II, Turner, N. L.

Final Honour Geology.-Class I, Schofield, S. J. Class II, Hill, J.
B. Paed., Section A.-Div. II, Putman, J. H. Section C.-Putman, J. H.

## PRACTICAL SCIENCE.

## SUPPLEMENTAL EXAMINATIONS, SEPTEMBER, 1906.

Trigonometry of Mathematics I.-Baker, F. G.
Geometry of Mathematics I.-Williams, T. B.; Ransom, F.
Algebra of Mathematics I.-Barnum, T. A.; Agassiz, W. G. ; Birkett, E. H.
Astronomy I.-Curtin, C. J.; Stewart, H. G.; Drury, C. W.
Mathematics II.-McGinnis, W. C.
Spherical Trigonometry and Astronomy II.-Curtin, C. J.; Milliken, J. B.; Gleeson, L.; McGinnis, W. C.
Physics I ( $A$ ).-Barnum, L. A.; Roberts, W. H.
Physics $I$ (B).-Neilson, A. C.; Birkett, E. H.; Cordukes, J. P. Physics II.-Irwin, R. T.; Woolsey, W. J.
Junior Chemistry.-Roberts, W. H.
Senior Chemistry.-Code, E. S. L.
Metallurgy I.-Woolsey, W. J.; McLaren, G. R.
Thermodynamics I.-Wright, G. C.; McLaren, G. R.; Twitchell, K. S.; Campbell, A. S.; Code, E. S. L.; Lavoie, Ed.; McGinnis, W. C.
Thermodynamics II.-Keith, G. C.
General Engineering I.-Richmond, D. W.; Cordukes, J. P.; McGinnis, T. A.; Cunningham, S. L.
General Enginecring II.-Lavoie, E. ; McGinnis, W. C.
Electrical Engincering I.-Twitchell, K. C.; Woolsey, W. J.; Richmond, D. W.
Electrical Engineering II.-Germain, H. A.
Railway Engineering I.-McArthur, F.
Mechanical Engineering II.-Germain, H. A.
Descriptive Geometry.-Campbell, W. M.; Dempster, H.; Keith, G. C. ; Campbell A. S.

Economic Geology I.-Curtin, C. J.
Geology II.-Curtin, C. J.

## SESSIONAL EXAMINATIONS, APRIL, 1907.

Junior English.-Div. I, Clarke, K.; Gallaher, O. Div. II, Morrison, W. M. ; Hutchison, R. M. ; Battersby, W. F.; Tuckett, W. H.; Doncaster, P. E.: Dobson, J. V.; Teskey, E. ; Johnston, P. K. ; Tower, W. O. ; Bell, W. A.; Thompson, E. A. ; Bell, F. A. Div. III, Keeley, D. J.; Butler, S. H. ; Hare, H. W.; Gillette, O. ; McCaugherty, L.; Huff, F.: Bertram, H. G. ; Callander, R. ; Goedike, F. B. ; Dowsley, H. D. ; Murphy, A. A.; Cooke, E. ; Whitmarsh, F. J.; Trimble, L.; Young, J. H.; Robinson, S. D.; MacKenzie, R. M, ; Macdonald, J. G.; McCullough, T, H, ; Orser,
E. H. ; Arthur, A. J.; Gorman, A. ; Fletcher, W. J.; Fares, A. W.; Lockett, W. F.; Spearman, Charles; Rose, J. H.; Offord, Charles; Murray, C. W.; Norrish, B. E.; Madden, M. S. ; Ewart, McL.; George, G.; McDonough, J. P.; Bateman, A.; Purvis, S. A. ; Sears, J.; Stanley, J. L.; Cameron, G.; Moran, P. J.

Mathematics I, Trigonometry-Div. I, Bell, W. A.; Battersby, W. F. ; Clark, W. C. ; Drewry, G. F.; Clarke, K. S.; Gillette, O.; Hutchison, R. H.; Bell, F. A.; Gallaher, O. G.; Morrison, W. M.; Stanley, J. L.; Tower, W. O.: Bertram, H. G.; Fletcher, W. ; Rose, J. H. ; McPherson, J. C. R. Div. II, Doncaster, P.; Butler, S. H.; Keeley, D. E.; Johnston, P. K.: Callander, R.; Mills, T. S. ; Adams, L. B.; Bourgoing, S. ; Neilson, R.; Sears, J. E. Div. III, Young, J. H.; McCullough, F. H.; Wigle, E. R.; Day, C. W.; Dobson, J. V.; Madden, M. S.; Ewart, M.; Hubbard, W. H.; Fares, A. W.; George, G. ; Orser, E. H. ; Tuckett, W. H.; Bateman, A.; Collins, W. H. E.; Elliott, R. A.; Ferguson, G. M.; Spearman, C.; Huff, F. H.; Robinson, S. D.; Carscallen, H. A.; McCaugherty, L. A.; Trimble, L. V.; Dowsley, H. D.; Hare, H. W.; Hope, A.; Maguire, J.; McKenzie, R. M. ; Teskey, E. ; Connor, T. J.; Reyes, P.; Purvis, S. A. ; Murphy, E. P.; Cameron, G.

Mathematics I, Algebra-Div. I, Bell, W. A.; Battersby, W. B.; Hutchison, R. H. ; Clark, W. C. ; Adams, T. B. ; Bertram, H. G.; Butler, S. H.; Drewry, G. F.; Clarke, K. S.; Dowsley, H. D.; Rose, J. H. ; Johnston, P. K. Div. II, Bell, F. A.; Hare, H. W.; Gallaher, O. G.; Mills, T. S.; Fletcher, W. G.; Morrison, W. M. ; Day, C. W. ; Robinson, S. D. ; Fares, A. W. ; Ewart, M. ; Ferguson, G. W.; Sears, J. E.; Stanley, J. L.; Tower, W. O.; Callander, R. ; Potter, S. C. ; Gillette, O.; Hubbard, W. H. ; Neilson, R.; McCaugherty, L. A. Div. III, Keeley, D.E.; Purvis, S. A.; Spearman, C.; Collins, W. H. E.; Trimble, L. V.; Wigle, E. R..; Carscallen, H. A.; Tuckett, W. H. ; Dobson, J. V.; McKenzie, R. M. ; Madden, M. S.; McCullough, F. H. ; McPherson, J. C. R. ; Davis, N. B.; Young, J. H. ; Elliott, R. A.; Bateman, A.; Orser, E. H. ; Scott, A. W.; Reyes, P.; George, G. ; Hope, A.; Doncaster, P.; Cameron, G.; Murphy, E. P.; Goedike, F. B. ; Bourgoing, S.; Gorman, A.; Mills, W.; Teskey, E.; Huff, F. H.

Mathematics I, Geometry-Div. I, Bell, W. A. Battersby, W. F. ; Clarke, K. S.; Hutchison, R. H.; Bertram, H. G.; Clarke, W. C. ; Rose, J. H. Div. II, Drewry, G. F.; Gillette, O.; Bell, F. A.; Mills, T. S.; Gallaher, O. G.; Ewart, M.; Tower, W. O. Div. III, Sears, J. E.; Adams, L. B.; McPherson, J. C. R.; Robinson, S. D.; Butler, S. H.; Fletcher, W. J.; Keeley, D. E.; Neilson, R. ; Young, J. H.; Dowsley, H. D.; Johnston, P. K.; Huff, F. H. ; McCaugherty, L. A.; Morrison, W. M.: Callander, R. ; Dobson, J. V.; Spearman, C.; Doncaster, P.; Tuckett, W. H.; Goedike, F. B.; Orser, E. H.; Asselstine, B.; Day, C. W.; Collins, W. H. E.; McKenzie, R. M.; Connor, F.; Stanley, J. L. ; Warner, J. F.; Carscallen, H. A.; Jarvis, H. R. ; Hare, H.
W.; Fares, A. W.; Bourgoing, S.; Bain, W. G.; Gorman, A.; Murphy, E. P.; McEwen, D. C.; Carmichael, H. M.; George, G.

Mathematics I, Descriptive Astronomy - Div. I, Orr, W. J.; Clark, W. C.; Clarke, K. S.; Bell,, W. A.; Hutchison, R. H. Div. II, Sine, F. L.; Battersby, W. F.; Gallaher, O. G.; Johnston, P. K.; Morrison, W. M. ; Day, C. W. ; Bertram, H. G. ; Spearman, C. Div. III, Gillette, O.; Bennett, J.; Keeley, D. E. ; Sears, J. E.; Neilson, A. C. ; Rose, J. H. ; Bell, F. A. ; Bourgoing, S.; Adams, T. B.; McCullough, F. H. ; Doncaster, P. ; Orser, E. H. ; Teskey, E. ; Dobson, J. V.; Drewry, G. F.; Butler, S. H. ; Young, J. H.; Mills, T. S. ; Fletcher, W. J. ; Warner, J. F.; Tuckett, W. H.; Cooke, E.; Murphy, P.; Mills, W. ; Norrish, B. E.; Hare, H. W.; MicPherson, J. C. R. ; Madden, M. S.; Dowsley. H. D. ; Carscallen, H. A.; Davis, N. B. ; Robinson, S. D.; Roberts, W. H.; Fares, A. W.; Bain, W. G.; Thompson, E. A.; Tower, W. O.; Cameron, G.

Mathematics II, Conics and Calculus-Div. I, Orr, W. J.; Bruce, E. L. ; Kelso, J.; Carmichael, J. E.; Campbell, W. E.; Williams, M. Y.; Crawford, V. W.; Ferguson, D.; Kilburn, G. H. Div. II, Watson, A. R.; Chartrand, E.; Williams, K. F.; Drury, C. W.; Malloch, E. S.; Nicol, D. S.; Campbell, T. D. Div. III, Keith, G. C.; Jenkins, G. A.; Frost, E. S.; Ryan, F. H.; Perry, O. M.; Osborne, J. K.; Mateer, T. J.; Young, A. C.; Squire, A. M. ; Agassiz, W. ; Campbell, W. M. ; Roberts, W. H. ; Stirling, J. B.; Woods, S. A.; Neilson, A. C.; Newlands, N.; McIntosh, J. S.; Hays, C. L.

Mathematics II, Spherical Trigonometry and Astronomy.-Div. I, Bruce, E. L.; Carmichael, J. E. ; Campbell, W. E. ; Kilburn, G. H. ; Kelso, J. A.; McIntosh, J. S.; Lawson, W. E.; Daly, J. Div. II, Orr, W. J.; Watson, A. R.: Williams, K. F.; Chartrand, E. ; Brown, C. D. ; Dempster, H. ; Nichols, D. A. ; Ferguson, D.; Osborne, J. K.; Mateer, T. 'J. Div. III, Hays, C. L.; Fleming, H. ; Young, A. C. ; Scott, J. N.; Arthur, A. J.; Squire, A. M.; Jenkins, G. A.; Peeling, C. U. ; Neilıon, A. C.; Crawford, V. W.; Grant, A. M. ; Ryan, F. H. ; Frost, E. S. ; Stirling, J. B. ; Ransom, F.; Williams, M. Y.; Ockley, R.; Woods, S. A.; Cunningham, S. L.; Williams, T. B.

Physics I (A), Dynamics-Div. I, Clarke, K. S.; Bell, W. A.; Battersby, W. F.; Bertram, H. G.; Gillette, O.; Sears, J. E.; Day, C. W.; Drewry, G. F. ; Hutchison, R. H.; Bell, F. A.; Keeley, D. E. Div. II, Morrison, W. M. ; Lockett, W. F.; Rose, J. H. ; Hubbard, W. H. ; Johnston, P. K. ; McKenzie, R. M.; Tuckett, W. H.; Butler, S. H.; Adams, T. B.; Clark, W. C.; Spearman, C. Div. III, Robinson, S. D.; Stanley, J. L. ; Gorman, A. ; Collins, W. H. E. ; Orser, E. H. ; Callander, R.; Fares, A. W.; McCaugherty, L.A.; Davis, N. B.; Elliott, R. A.; Ewart, McL.; Teskey, E.; Asselstine, B.; Bourgoing, S.; Fletcher, W. J.; Gal-
laher, O. G.; Mills, T. S. ; Carscallen, H. A. ; Dobson, J. V.; Hare, H.; Young, J. H.; Warner, J. F.;-Bateman, A.; Huff, F. H. ; McCullough, F. ; McPherson, J. C. R. ; Madden, M. S. ; Maguire, J.; Moran, P. J.; Cook, W. E.; George, G.; Houston, D.; Neilson, R.; Cameron, G. ; Doncaster, P.; Skinner, P. (passed on class record).

Physics I (B), Experimental-Div. I,Battersby, W. F.; Bell, W. A.; Clarke, K. S.; Hutchison, R. H.: Adams, T. B. ; Morrison, W. M. ; Tower, W. O. ; Rose, J. H. ; Robinson, S. D. ; Young, J. H. ; Drewry, G. F. ; Gillette, O. Div. II, Lockett, W. F. ; Hare, H. W.; Ewart, McL.; Tuckett, W. H.; Sears, J. E. ; Clark, W. C. ; Day, C. W.; Mills, T. S.; Bateman, A. M. ; Warner, J. F.; Teskey, E.; Cameron, G.; Gallaher, O. G.; Dowsley, H. D.; Bertram, H. G.; McCaugherty, L. A.; Spearman, C.; Butler, S. H. ; Fletcher, W. J.; Bourgoing, S. Div. III, Keeley, D. E.; Bain, W. G.; Dobson, J. V.; Callander, R. ; McCullough, F. R.; Fleming, H.; Bell, F. A.; McIntosh, J. S.; Hubbard, W. H.; Collins, W. H. E.; Cook, W. E.; Purvis, S. A.; Doncaster, P. E. ; McPherson, J. C. R.; Johnston, P. K. ; Maguire, J.; Fares, A. W.; Davis, N. B. ; Orser. E. H.; George, G.; Asselstine, B. ; Huff, F. H. ; Madden, M. S.; Neilson, R.; Goedike, F. B.; McKenzie, R. M. ; Elliott, R. A.; Scott, A. W.; Lawler, A. P.; Connor, T.; Ferguson, G. M.; Newlands, N.; Skinner, P. (passed on class record).

Phy'sics II-Div. I, Campbell, W. E.; Williams, M. Y.; Kelso, J. A.; Chartrand, E.; Carmichael, J. E. Div. II, Woods, S. A.; Jenkins, G. A.; Watson, A. R.; Kilburn, G. H.; Crawford, V. W.; Perry, O. M.; Fleming, H.; Grant, A. M. ; Nicol, D. S. Div. III, Bruce, E. L. ; Campbell, A. S.; Williams, T. B.; Fleming, D. B. ; Osborne, J. K. ; Daley, J. C.; Frost, E. S. ; Campbell, W. M.; Peeling, C. U.; Saint, J. B.; Young, A. C. ; Stirling, J. B.; Dempster, H. ; Fleming, A. A.; Campbell, T. D.; Hays, C. L.; Ransom, F.; Drury, C. W.; Agassiz, W.; Williams, K. F. A.; McIntosh, J. S. ; Houston, D. W..; Ferguson, D.

Physics III—Div. I, Frost, E. S. Div. II, Nicol, D. S.; Woods, S. A.; Ockley, R. ; Peeling, C. U.; Orr, W. J. Div. III, Daley, J.; Perry, O. M.; Williams, K. F.; Crawford, V. W.; Malloch, E.

Physics IV-Div. I, Jeffery, R. T.; Germain, H. A.; Grant, A. M. Div. III, Code, E. L. S.; Jeffery, J. J.; Marshall, J. H.; Richmond, D. W.; Stott, J.; Norrish, B. E.; Stiles, L. P.; Fleming, D. B.

Junior Chemistry.-Div. I, Bell, W. A., Clarke, K. S., equal ; Battersby, W. F.; Hutchison, R. H.; Huff, F. H., Drewry, G. F., equal; Sears, J. E.; Hare, H. W.; Bell, F. A.; Gilbert, A. V. ; Fletcher, W. J., Kane, L., Madden, M. S., equal ; Bertram, H. G., Adams, L. B, Rose, J. H., Robinson, S. D.; Orser, E. H., equal. Div. II, Gallaher, O. G.; Morrison, Wm. M.; Mc-

Cammon, J. G., Butler, S. H., Gillette, O., equal ; J. L. ; McPherson, J. C. R.; Carscallen, H. A.; Johnston, P. K. Div. II, Dobson, J. V.; Keeley, D. E., Cameron, G., equal; Dowsley, H. D.; Murphy, E. P., Hubbard, Wm. H., equal; Teskey, E., Fares, A. W., equal ; Connor, T., Tuckett, Wm. H., equal; Callander, R.; Young, J. H.; Neilson, L. R., Tower, Wm. O., Warner, J. F., Doncaster, P. E., Gorman, A., equal ; Davis, N. B., Purvis, S. A., equal; Asselstine, B., Elliott, R. A., equal; Bateman, A., Ewart, M., Collins, W., McKenzie, R. M., equal; George, G., McCaugherty, L. A., Div. III, MiDonough, Jas. P.; Lawler, A. P.; Ferguson, Geo. M.; Moran, P. J.; McCullough, F. H.; McEwen, D. C.; Wigle, E. R.; Spearman, Chas.; Whitmarsh, F. J.; Cooke, E.; Trimble, Leo B.; Storey, S. E.; Reyes, P.; Goedike, F. B.; Bain, W. G.

Senior Chemistry-Div. I, Bruce, E. L.; Kelso, J. A.; Williams, M. Y.; Campbell, W. E. ; Drury, C. W.; Ferguson, D.; Agassiz, W.; Kilburn, G. H.; Ockley, R.; Mateer, T. J., Perry, O. M., equal; Woods, S. A. Div. II, Nicol, D. S.; Daley, J. C.; Jenkins, G. A. ; Nichols, D. A.; Osborne, J. K. : Frost, E. S.; McDowall, R. J. ; McIntosh, J. S., Chartrand, E., equal; Rose, B. ; Ransom, F.; Williams, T. B. Div., III, Barnum, L. A.; Dempster, H., Peeling, C. U., Ryan, F. H., equal ; Lawson, W. E., Squire, A. M., equal ; Campbell, T. D.; Hays, C. L., Scott, J. N, equal; McArthur, F. J., Newlands, N., equal; George, W. B. ; Birkett, E. H.; Young, A. C. ; Smith, R. R.; Neilson, A. C.; Potter, R.; Stiles, L. P., Malloch, E. S., Fleming, J. E., equal.

Qualitative Analysis I-Div. I, Drury, C. W.; Ellis, D. S.; Carmichael, J. E. ; Crawford, V. W. Div. II, Bruce, E. L., Williams, M. Y., equal; Kelso, J. A.; Ransom, F.; Orford, C.; Kilburn, G. H.; Stewart, A. G.; Woods, S. A.; Mateer, T. J.; Birkett, E. H., Campbell, W. E., equal ; Osborne, J. K., Williams, T. B., equal ; Frost, E. S., McDowall, R. J., Nicol, D. S., Ockley, R. F., equal ; Nichols, D. A.; Daley, J. C., Lawson, W. E., Perry, O. M., equal ; Cordukes, J. P., Ferguson, D., equal; Gleeson, L. J., Neilson, A. C., Rose, B., Squire, A. M., Young, A. C., equal. Div. III, Peeling, C. U.; Fleming, J. E.; Bennett, J.; Smith R. R. allowed.

とualitative Analysis II-Div. I, Drury, C. W.; Ellis, D. S.; Bruce, E. L. Div. II, Kelso, J. A., Rose, B., equal ; Cordukes, J. P. Div. III, Carmichael, J. E.; Campbell, W. E., Fleming, J. E., equal.

Qualitative Analysis $I I I$-Div. I, Bruce, E. L.; Ellis D. S. ; Crawford, V. W. ; Drury, C. W. Ockley, R. F. Div. II, Peeling, C. U.; Frost, E. S. ; Daley, J. C., Perry, O. M., Squire, A. M., Woods, S. A., equal. Div. III, Gleeson, L. J., Neilson, A. C., equal ; Nicol, D. S.; Bennett, J.

Qualitative Analysis IV -Div. I, Drewry, C. W.; Ferguson, D., Williams, M. Y., equal; Cordukes, J. P., Kilburn, G. H., McDowall, R. J., Stewart, A. G., equal. Div. II, Lawson, W.
E. ; Bruce, E. L., Orford, C., Young, A.C., equal ; Birkett, E. H.; Ransom, F.; Nichols, D. A., Osborne, J. K., equal. Div. III, Fleming, J. E., Smith, R. R., equal.

Physical Chemistry I-Div. I, Kidd, G. E.
rhysical Chemistry II-Div. I, Germain, H. A.; Code, E. S. L.; MacKenzie, H. A. Div. II, Arthur, A. J. : Murphy, A. A. Div. III, Stiles, L. P.; Browne, P. J.; Richmond, D. W.

Quantitative Analysis I-Div. II, Rockwell, D. B.; Cordukes, J. ; McKay, B. R.; Fleming, A. A. Div. III, Trueman, J. D. ; Harding, W. M.; Alder, W. R.

Quantitative Analysis II—Div. II, Fleming, A. A. Div. III, Cordukes, J.

Quantitative Analysis III-Div. II, Fleming, A. A.
Quantitative Analysis IV - Div. I, Stidwell, F.; Cummings, A.; McColl, C. R. Div. II, Brown, C. D.; Milliken, J. B. Div. III, Findley, A.; Pringle, J. F.; Dempster, H.; McGinnis, T. A.

Fire Assaying-Div. I, McKay, R. B., Orford, C., equal ; Turner, N. L.; Henry, S. H., McMillan, G., equal. Div. II, Rockwell, D. B. ; Van Winkle, H.; Trueman, J. D.; Lipman, A. ; Stewart, A. G. ; Kidd, G. E. Div. III, Cordukes, J. P.; Harding, W. M.

Chemistry and Use of Explosives-Div. III, McArthur, F. T.
Mineralogy I-Div. I, Kelso, J. A.; Bruce, E. L. ; Campbell, W. E. ; Rose, B.; Williams, M. Y.; Kilburn, G. H.; Ransom, F.; Goodwin, W. M. Div. II, Birkett, E. H.; Drury, C. W.; McDowall, R. J.; Hutchison, R. H. ; Lawson, W. E. ; Young, A. C.; Osborne, J. K. Div. III, Ferguson, D.; Smith, R. R.; Scott, J. N. ; Mateer, T. J.; Agassiz, W.; Fleming, J. E.

Mineralogy II-Div. I, Sine, F. L. ; Kidd, G. E. ; Rose, B. Div. II, Bruce, E. L. ; Drury, C. W.

Mineralogy III-Div. I, Ferguson D. ; Ransom, F: ; Brewster, F. A.; Osborne, J. K.; Kilburn, G. H.; Young, A. C. ; Mateer, T. J. Div. II, Nichols, D. A.; Lawson, W. E. ; Scott, J. N.; Williams, M. Y.; McDowall, R. J. Div. III, Smith, R. R.; Birkett, E. H.; Williams, T. B.

Mineralogy IV-Div. I, Sine, F. L. • Orford, C. Div. II, Trueman, J. D.; Stewart, A. G.; Kidd, G. E.; Rockwell, D. B.; McKay, B. R. Div. III, Harding, W. M.; Cordukes, J. P.

Geology I-Div. I, Carmichael, J. E.; Ransom, F.; Lawson, W. E. ; Bruce, E. L.; Williams, M.T.; Nichols, D. A.; Ferguson, D. ; Hays, C. L. ; McDowall, R. J.; Stewart, A. G. ; Smith, R. R. Div. II, Mateer, T. J.; Osborne, J. K.; Rose, B.; Williams, T. B. ; Kilburn, G. H. ; Jenkins, G. A.; Saint, S. B.; Agassiz, W.; Eirkett, E. H. ; Pennock, E. L. ; Young, A. C. Div. III, Fleming, J. E. ; Campbell, T. D.; McIntosh, J. S.; Drury, C. W.; Scott, J. N.

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Mechanical Engineering II-Div. I, Grant, A.' M.; Jeffery, J. J. Div. II, Stott, T.; Marshall, J. H. Div. III, Jeffery, R. T.; Fleming, H.; Norrish, B. E. ; Baker, F. G.; Richmond, D. W. Mechanical Engineering IV-Div. I, Mackenzie, H. A.; Bartlett, J.; Malcolm, L. ; Germain, H. A.; Sands, J. M. ; Herriott, G. H.; Jenkins, W. E. ; McKay, G. J.; Matheson, H. ; Lazier, F. S.; Calvin, J. D.; King, J. L. Div. II, Browne, P. J.; Rogers, W. R.; Peppard, H. M.; Kilburn, D. G.; Potter, R.; McCulloch, R. O.; Murray, C. W.; Irwin, R. T. Div. III, Alder, W. R.; McEwen, D. F.; Code, E. S. L.; Campbell, A. S. ; Curtin, C. J.; Akins, J. R.; Wright, G. C. ; Lavoie, E. E.; Woolsey, W. J.; Gleeson, L. J.; Stiles, L. P.; Murphy, A. A.; McLaren, G. R.; Houston, D. W.; McArthur, F.

Mechanical Engineering VI-Div. II, L. J. Gleeson. Div. III, Keith, G. C.

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Perry, O. M. ; Watson, G. R.; McDowall, R. J.; McIntosh, J. S.; Malloch, E. S.; Young, A. C.; McLaren, G. R.; Smith, R. R.; Woods, S. A.; Barnum, L. A.; Sills, O.; Agassiz, W.
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Surveying II-Div. I, Chartrand, E.; Kilburn, G. H.; Ferguson, D.; Williams, M. Y.; Jenkins, G. A. Div. II, Hays, C. L.; Campbell, T. D.; Bruce, E. L.; Lawson, W. E.; Ransom, F.; Osborne, J. K. ; Dunkley, J. B.; Williams, T. B. Div. III, Nichols, D.A. ; Mateer, T. J.; MacIntosh, J. S.; Fleming, J. E.; Watson, A. R.; Cordukes, J. P.; Scott, A. W.; Brewster, F. A. ; Saint, J. B. ; Newlands, N.

Surreying III-Div. I, Saint, J. B.; Jenkins, G. A.; McIntosh, J. S.; Chartrand, E.; Newlands, N. Div. II, Watson, A. R.; Hays, C. L.; Campbell, T. D.; Dunkley, J. B.

Surveying IV-Div. I, Findlay, A.; Malcolm, L.: Stidwell, F.; Cummings, A.; McColl, C. R.; Pringle, J. F.; Dunkley, J. B.; Milliken, J. B.; Sweezey, R. O.; Trueman, J. D.; Cordukes, J. P.; Brown, C. D. ; Orford, C. Div. II, Rockwell, D. B.; McKay, B. R.; Dempster, H.; Fleming, A. G.; Harding, W. M. Div. III, McGinnis, T. A.; Cunningham, S. L.; Stuart, A. G.
Surveying V-Div. I, Agnew, C. W.; McColl, C. R.; Dempster, H.; Sweezey, R. Q.; Findlay, A. Div. II, Stidwell, F.: Cummings, A. ; McGinnis, T. A. Div. III, Cunningham, S. L. ; Brown, C. D.; Dunkley, J. B.

Mining Law-Div. I, McLaren, G. R.; Alder, W. R.; Murray, C. W. Div. II, Matheson, H. ; Curtin, C. J.; Sands, J. M.; McKay, G. J.; Irwin, R. J. Div. III, Akins, J. R.; Houston, D. W.

## THEOLOGY.

MATRICULATION, OCTOBER, 1906.
McDonald, R. J., Sully, L. K., Jackson, R. C.
Buchan No. I, \$65.-Jackson, R. C., Pictou, N.S.

## SUPPLEMENTAL, NOVEMBER, 1906.

Apologetics.-Brydon, R.
O. T. Criticism.-Brydon, R.; Lynd, L. E.
B. D. Work-

Textual Criticism of the New Testament.-Lindsay, M. F.
The Atenement.-Smith, J. E.
Bruce's Apologetics.-MacKinnon, A. G.
Genesis.-Marshall, D. H.

## SESSIONAL EXAMINATIONS, 1907.

Systematic Theology.-McDonald, R. J.; Allen, H. H. ; Brydon, R. ; Barnard, A. T.; Brown, G. A.; Stevenson, R. M.; Macdonald, J.; Nicol, J. L.; Hay, W.; Tod, A. S.; Watt, W. J. ; Beveridge, R. W. ; Ferguson, W.; Jackson, R. C. ; Jewitt, T. J.; McCuaig, H. D. ; Lynd, L. E. ; Marshall, D. H.; Miller, F.; Urquhart, J. ; Sully, L. K. ; Stewart, D. J.
Junior Hebrew.-Div. I, Dobson, W. A.; McEachern, J. G.; Brown, D.; Rintoul, A.; Shaver, Chas. A. Div. II, Somerville, R. W.; Jackson, R. C. ; McDonald, George; Warren, P.; Lynd, L. E.; Raney, W. H. Div. III, Nicol, J. L. ; Atwater, H. E. ; Anglin, R. W.; Little, A. M. ; Douglas, J. H.

Senior Hebrew-Div. I, Cornett, A. D., Omond, M. N., equal; McIntosh, W. D.; Liggett, R. H. Div. II, Jewitt, T. J.; Lynd, L. E.; Stott, W. Div. III, McAskile, J.; Gilchrist, W. A.

Old Testament Criticism, Third Year.-Div. I, Brown, G. A.; Barnard, A. T. Div. II, Stevenson, R. M.; Watt, W. J.; Marshall, D. H. Div. III, Beveridge, R. W.; Stewart, D. J.
Old Testament Criticism, Second Year.-Div. II, Allen, H. H.; Macdonald, J.; Brydon, R.; Tod, A. S. Div. III, Lynd, L. E. ; Miller, F.; Hay, W. M.

Old Testament Criticism, First Year.-Div. II, McDonald, R. J.; Sully, L. K.; Ferguson, W., Jackson, R. C., Jewitt, T. J., equal Div. III, Nicol, J. L.; McCuaig, H. D.; Urquhart, J. R.

Apologetics.-Div. I, McDonald, J.; Tod, A. S.; Hay, W. M.; Allen, H. H. ; Ferguson, W.; Jewitt, T. J.; Lynd, L. E. Div. II, McCuaig, H. D.; Beveridge, R. Div III, Miller, F.; Urquhart, J. R.; Marshall, D. H.
Honour, Old Testament Criticism.-Old Testament Instruction, Brown, G. A.; Stevenson, R. M.; Watt, W. J. Old Testament Exegesis (Samuel), Allen, H. H, ; Macdonald, J. Holy Scriptures (Old Testament), Stevenson, R. M.; Strachan, C. C. ; Munro, M. F.; Watt, W. J. Old Testament Criticism (Aramaic), Brown, G. A.; Marshall, D. H.; Stevenson, R. M. ; Cameron, A.; Watt, W. J.
N. T. Exegesis.-McDonald, R. J.; McDonald, J.; Tod, A. S.; Nicol, J. L. ; Jewitt, T. J. ; Allen, H. H. Div. II, McCuaig, H. D.; Marshall, D. H. ; Hay, W. M.; Jackson, R. C. ; Watt, W. J.; Ferguson, W.; Brown, G. A.; Barnard, A. T. Div. III, Beveridge, R.; Stevenson, R. M.; Stewart, D. J.; Urquhart, R. J.; Lynd, L. E.; Miller, F.
N. T. Criticism.-Div. I, Allen, H. H.; Beveridge, R.; McDonald, R. J.; Brown, G. A.; Nicol, J. L.; McDonald, J.; Marshall, D. H.; Stevenson, R. M.; Stewart, D. J.. Div. II, Tod, A. S.; Jewitt, T. J.; Barnard, A. T.; Jackson, R. C. Div. III, Watt, W. J.; Ferguson, W.; Miller, F.; Urquhart, J. R.; McCuaig, H. D.; Hay, W. M.

Honours. N. T. Exegesis.-Brown, G. A.; Munro, M. E. ; Brydon, R.; Tod, A. S. ; McInnes, W. H. ; Cameron, A. E. Atonement, Allen, H. H. Christian Doctrine of Sin, Strachan, C. C. The Church (Ecclesia), Strachan, C. C.
Church History.-Div. I, Brown, Geo. A.; McDonald, R. J.; Allen, H. H. ; Barnard, A. T.; Ferguson, William. Div. II, Jackson, R. C.; Nicol, J. L.; Macdonald, J.; Marshall, D. H.; Hay, W. M.; Stevenson, R. M.; Beveridge, R. W.; Watt, W. J. ; Tod, A. S.; Sully, L. K. Div. III, Jewitt, T. J.; Brydon, R. ; Lynd, L. E.; Urquhart, J.; Stewart, D. J.; Miller, Fred.; McCuaig, H.
Honour Cnurch History, Christian Institutions.-Watt, W. J.; Stevenson, R. M. Apostolic Fathers, Cameron, Alexander; Macdonald, J.; Tod, A. S.
Holy Scriptures N. T. (B.D.)-Brown, G. A.; Munro, M. F.; Watt, W. J.; Stevenson, R. M. ; Strachan, C. C.
N. T. Language.-Div. I, Stevenson, R. M. Div. II, McDonald, R. J.; Jewitt, T. J. Div. III, Watt, W. J.; Brown, G. A.; Nicol, J. L.; Marshall, D. H.
N. T. Canon.-Lindsay, M.

Honors, N. T. Introduction.-Brown, G. A.; Tod, A. S.; Munro, M. F.; Cameron, A. E.; McInnes, W. H.; Brydon, R.

MEDICAL EXAMINATIONS, APRIL, 1907.

## FIRST YEAR.

Junior Anatomy-Thompson, H. R.; Anderson, W. E., Polson, S. M., equal; Moffatt, J. W.; Whaley; T. R.; Neville, J. D.; Bissell. E. S.; Jackson, J.; Gardiner, J. N., Stead, J. H., equal; Workman, H. C.; Paul, R. R.; Shaw, J. G.; Mohan, H.; Dash, B. J.; Bailey, J. G.; Dick, D.; McCutcheon, C. E., Carmichael, D. A., Gibson, M. J., equal; Gannon, A. H.; Ferguson, R. M.; Gibson, G. M., Mellad, E. V. W., equal ; Hunter, F. R., Gibson, A. S., equal ; Huff, J. S., Beroard, E., equal; Graham, E. R.; Dunn, J. M.; Vickery, A. J., Wickware, A. B., equal; Wise, H. T., Cooke, G. L.; Campbell, G. L.

Animal Biology and Junior Physiology.-Polson, S. M.; Anderson, W. E.; Thompson, H. R. ; Mohan, H.; Bissell, E., Whaley, T. R., equal; Neville, J. D.; Jackson, J.; Matthews, F. J., Hunter, F. R., equal; Mellad, E. V. W., Beete, J. T., equal; Beroard, E., Moffatt, J. W., Bailey, J. G., equal; Paul, R. R., White, G. E., Phillips, R. J., Vickery, A. J., equal ; Wickware, A. B.; Dunn, J. M.; McCutcheon, C. E.; Gibson, G. M.; Gannon, A. H.; Gibson, M. J., Graham, E. R., Birch, S. R., Barker, E. A., equal ; Cooke, G. L., Dash, B. J., equal; Ferguson, R. M., DesRosiers, A., Dougan, J. A., McLaren, W. M., Craig, W. H., equal.
Junior Materia Medica.-Thompson, H. R.; Bailev. J. G.; Moffatt, J. M.; Usher, W. C.; Pclson, S. M.; Hughes, C. A.; Matthews, F.; Phillips, R. J.; Bennett, J. R.; Kendrick, G. B.; Carmichael, D. A.; Jackson, J.; Hunter, F.; Stead, J. H., Huff, J. S. equal ; Beroard, E.; White, G. E., Ligoure, C. C., equal ; Mohan, H., Gibson, G. M., equal; Gardiner, J. N.; Paul, R. R.; Corrigall, J. W.; Workman, H., Ferguson, R. M., Whaley, T. R., equal; Gibson, A. S., Campbell, G., Ferguson, A., Birch, S. R., equal ; Dunn, J. M., Mellad, E. V. W., equal ; Bissell, E., Neville, J. D., Dash, B. J., McLaren, W. M.; Bowers, P. S., Beete, J. T., Dougan, J. A., Barker, E. A., equal.
Junior Chemistry.-Polson, S. M.; Whaley, T. R.; Moffatt, J. W.; Bailey, J. G., Mohan, H., equal ; Dash, B. J., Beete, J. T., equal; Thompson, H. R.; Paul, R. R., Ferguson, R. M., equal; Neville, J. D.; Kingsley, J. V.; Vickery, A. J.; Graham, E. R.; Ligoure, C. C., Dunn, J. M., equal ; Jackson, J.; Matthews, F. J.; Campbell, G. L.; Gibson, G. M., Mellad, E. V. W., equal ; Cooke, G. L.; Mavety, A. F.; Hunter, F. R. Physics.-Meyer, G. W.; Wise, H. T.; Mavety, A. F,

## SECOND YEAR.

Senior Anatomy.-Hutton, J. B.; Usher, W. C. ; Mackinnon, M. C. ; Carmichael, D. A.; McCann, J. J.; Gandier, J. C., Galbraith, J. E., equal ; Goodfellow, T. J., McPherson, J. J., equal; Gillie, J. C., McIntosh, J. H., equal ; Letherland, A.; Shillabeer, J. C., Murphy, O. W., Chatham, H. E., equal ; Lermont, H. M., Wickware, B. L., Robb, D., Hughes, C. A., equal; Corrigall, J. W., Dunham, C. S., Brunet, J. E., Knight, C. H., Marcellus, T. N., Bradley, R. M., equal; Bracken, E. J., Hughes, R. A., equal; Reynolds, B. C., Wallace, W. G., equal ; Dougan, J. A., Quinn, J. S., Keeley, A. J., equal.

Senior Physiology.-Hughes, C. A.; Galbraith, J. E.; MacKinnon, M. C., McIntosh, J. H., Corrigall, J. W., equal ; Chatham, H. E. ; Gillie, J. C. ; McCann, J. J., Gandier, J. C., equal ; Hutton, J. B., Marcellus, T. N., equal ; McPherson, J. J. ; Shillabeer, J. C. ; Bracken, E. J.; Murphy, O. W.; Wickware, B. L.; Brunet, J. E.; Quinn, J. S., Lermont, H. M., equal; Dougan, J. A.; Knight, C. H.; Barker, E. A.; McPherson, C. J.; Ferguson, Alex.; Keeley, A. J., Gibson, A. S., equal ; Burns, C. W., Ford, W. H., Salmon, A. J., Falconer, G. R., Bond, H. E., equal ; McCambridge, L. L.
Histology.-Corrigall, J. W.; Marcellus, T. N.; Polson, James; McPherson, J. J.; Hunter, G. H. V.; Shillabeer, J. C.; Gillie, J. C.; Galbraith, J. E. ; Hughes, C. A., Murphy, O. W., equal; Barker, E. A. ; Gandier, J. C., MacKinnon, M. C., equal; Chatham, H. E.; McCann, J. J.; Hutton, J. B.; Wickware, B. L. ; Knight, C. H., McIntosh, J. H., equal ; Ferguson, A.; Brunet, J. E.; Bracken, E. J.; McPherson, C. J. ; Salmon, A. J.; Mabee, H. C., Lermont, H. M., equal ; Quinn, J. S.
Senior Materia Medica and Pharmacology.-MacKinnon, M. C.; Thompson, H. R. ; Gillie, J. C. ; Usher, W. C. ; McCann, J. J., Carmichael, D. A., equal; Dunham, C. S.; Hughes, C. A.; Salmon, A. J.; Hutton, J. B.; Galbraith, J. E.; Gandier, J. C.; Quinn, J. S.; McIntosh, J. H., Wickware, A. B., equal ; Wallace, W. G.; Robb, D. ; Knight, C. H.; Murphy, O. W.; Shillabeer, J. C.; Massiah, J. H., Dawson, L. M., equal; Chatham, H. E. ; Goodfellow, T. J.; Hurtubise, J. H.; Wickware, B. L.; Reynolds, B. C. ; Marcellus, T. N., Workman, H. C., Kingsley, W. A., equal; Connolly, N. W., McPherson, J. J., equal; Corrigall, J. W., Brunet, J. E., Allaire, J., Clancy, J. P. I., equal.
Physiological and Analytical Chemistry.-McPherson, J. J., Hughes, C. A., Gillie, J. C., Galbraith, J. E., Ferguson, A., equal ; Burns, C. W., Corrigall, J. W., equal; Brunet, E. J.; McIntosh, J. H., Quinn, J. S., Salmon, A. J., Byrne, E. P., Marcellus, T. N., McCann, J, J., equal; Raymond, A. L.,

Wickware, B. L., Chatham, H. E., equal ; Lermont, H. M., MacKinnon, M. C., equal; Knight, C. H., Craig, W. H., equal; Shillabeer, J. C., Gandier, J. C., McPherson, C. J., Murphy, O. W., Huff, J. S., equal ; Cays, F. A.; Hutton, J. B., Keeley, A. J., Falconer, G. R., equal; Bracken, E. J.; Little, Thomas; McLaren, W. M., equal.
Senior Chemistry.-Galbraith, J. E., MacKinnon, M. C., equal; McIntosh, J. H.; Gandier, J. C.; Hughes, C. A.; McCann, J. J.; Murphy, O. W.; Corrigall, J. W.; Gillie, J. C., McPherson, J. J., equal; Chatham, H. E.; Shillabeer, J. C.; Marcellus, T. N.; Beroard, E., Ford, W. H., Quinn, J. S., equal; Bracken, E. J.; Brunet, J. E.; Wickware, B. L.; Mabee, H. C.; Knight, C., equal ; Burns, C. W., McLaren, W. M., Lermont, H. M., equal; McPherson, C. J.; Cays, F. A.

## THIRD YEAR.

Junior Practice of Medicine.-Dunlop, H. ; Cotman, I. D.; Byers, J. C., MacDonald, A.; Usher, W. C.; Baker, J. O., Myers, E. T., equal; Nurse, C. T. C.; Beggs, W., Carmichael, S. V., Cornett, W. F., equal; Milburn, H. H., Sargent, F. R., equal ; Laing, A. V.; Magill, A. L.; Daley, T. V.; Hughes, R. A.; Ross, T. R., Coulombe, P. O., equal ; McIntosh, F. B. ; Ramdeholl, J. E. R.; Patterson, G. H., Connolly, N. W., equal ; McDermott, J. P., Ford, W. H. ; Morrison, W., equal; Quinn, P. J.; Raymond, A. L., Kennedy, W. D., Dawson, L. M., Costello, M. C., equal ; Hunter, G. H. V., Cole, W. H., Bradley, R. M., equal ; Thompson, B. H. ; Byrne, E. P.; Cameron, D. R., Cays, F. A., equal; Galleway, J. E. B., McKinley, N. J., Patterson, C. A., equal ; Massiah, J. H.; Claxton, W. A.; Fraser, L. H.; Clancy, J. P. I., Buck, L. L., equal ; Kelly, J. M., Hurtubise, J. R., equal; Kingsley, W.. A.; Lapierre, J. M.; Eby, D. M.

Junior Surgery.-Raymond, A. L.; Nurse, C. T. C.; Usher, W. C. ; Cole, W. H.; MacDonald, A., Dunlop, H., Myers, E. T., equal ; Cornett, W. F.; Carmichael, S. V.; Cotman, I. D., Sargent, F. R., equal ; Fraser, L. H.; Patterson, G. H., Hunter, G. H. V., equal ; Costello, M. C., Bradley, R. M., equal ; Baker, J. O., Quinn, P. J., equal ; Magill, A. L., Ross, T. R., equal; Daley, T. V., Coulombe, P. O., Thompson, B. H., equal ; Morrison, W., Buck, L. L., Kingsley, W. A., Milburn, H. H., Hughes, R. A., equal ; Ford, W. H.; Kelly, J. M., Byers, J. C., Kennedy, W. D., equal ; Beggs, W. ; McIntosh, F. B., Ramdeholl, J. E. R., equal ; McDermott, J. P.; Laing, A. V., Massiah, J. H.; Dawson, L. M. ; Byrne, E. P.; McKinley, N. J., Claxton, W. A., Cameron, D. R., equal; Patterson, C. A.; Connolly, N. W.; Clancy, J. P. I.; Eby, D. M.; Lapierre, J. M.; Cays, F. A.; Charbonneau, J. E.; Falconer, G. R.; Hurtubise, J. R,

Junior Obstetrics and Paediatrics.-Cornett, W. F.; Bradley, R. M.; Dunlop, H.; Nurse, C. T. C.; Usher, W. C. ; MacDonald, A.; Dawson, L. M.; Claxton, W. A.; Myers, E. T.; Cotman, I. D.; Beggs, W.; Ford, W. H.; Costello, M. C.; Ross, T. R.; Hughes, R. A.; Raymond, A. L.; Laing, A. V.; Quinn, P. J.; Connolly, N. W.; Coulombe, P. O.; Patterson, C. A.; Kennedy, W. D.; Carmichael, S. V.; Sargent, F. R. ; Milburn, H. H. ; Cameron, D. R. ; Baker, J. O. ; Morrison, W.; Padell, H. W.; McDermott, J. P.; Charbonneau, J. E.; Hurtubise, J. R.; Daley, T. V.; McIntosh, F. B.; Collinson, T. J.; Fraser, L. H.; Clancy, J. P. I.; Galloway, J. E. B. ; Cole, W. H.; Byers, J. C. ; Patterson, G. H. ; Kingsley, W. A.; McKinley, N. J.; Hunter, G. H.; Ramdeholl, J. E. R.; Falconer, G. R. ; Kelly, J. M. ; Buck, L. L.; Thompson, B. H.; Magill, A. L. ; Eby, D. M.; Massiah, J. H. ; Little, Thomas; Byrne, E. P.

Third Year Pathology.-Cotman, I. D.; Usher, W. C.; Nurse, C. T. C. ; Cornett, W. F.; Magill, A. L.; Carmichael, S. V.; Raymond, A. L., Sargent, F. R., equal; Patterson, G. H., Dunlop, H., equal ; Baker, J. O.; Connolly, N. W.; Workman, H. C., Myers, E. T., equal; Daley, T. V., Milburn, H. H., equal; Dawson, L. M.; Bradley, R. M., Buck, L. L., Byers, J. C., Hughes, R. A., Ross, T. R., equal ; Coulombe, P. O.; Beggs, William; Costello, M. C.; Kingsley, W. A., MacDonald, A., equal ; Ramdeholl, J. E. R.; Laing, A. V.; McKinley, N. J., McDermott, J. P., equal; Hunter, G.H. V., Kelly, J. M., Morrison, W., equal; Quinn, P. J.; McIntosh, F. B. ; Byrne, E. P.; Cays, F. A., Cole, W. H., Cameron, D. R., equal ; Little, Thomas; Fraser, L. H.; Collinson, T. J.; Claxton, W. A.; Charbonneau, J. E.; Ford, W. H.; Kennedy, W. D.

Jurisprudence and Toxicology.-Cotman, I. D.; Nurse, C. T. C. ; Raymond, A. L., Myers, E. T., Usher, W. C., equal ; Milburn, H. H.; Cornett, W. F.; Dunlop, H.; Dawson, L. M. ; Cole, W. H.; Ramdeholl, J. E. R.; Patterson, G. H., Stead, J. H., equal ; Daley, T. V., Costello, M. C., equal ; Baker, J. O., Carmichael, S. V.;, Magill, A. L., Bradley, R. M., equal ; Byers, J. C. ; Hughes, R. A.; Quinn, P. J., Kennedy, W. D., equal ; Thompson, B. H., Connolly, N. W., equal ; Robb, D., Ross, T. R., Kelly, J. M., equal; Kingsley, W. A., MacDonald, A., equal ; Morrison, W.; Hunter, G. H. V., Workman, H. G., equal ; Buck, L. L., Goodfellow, T. J., Massiah, J. H., equal; Laing, A. V.; McDermott, J. P.; Coulombe, P. O. ; Claxton, W. A. ; McIntosh, F. B. ; Byrne, E. P.; Hurtubise, J. R.; Fraser, L. H.; Doyle, J. F., McKinley, N. J., Ford, W. H., equal; Clancy, J. P. I.; Dunham, C. S., Patterson, C. A.; Little, Thomas, equal; Beggs, W.

Junior Medical and Surgical Anatomy--Cotman, I. D.; Nurse, C. T. C. ; Daley, T. V.; Dunlop, H. ; Sargent, F. R.; Ross, T. R.; Cornett, W. F.; Myers, E. T.; Costello, M. C.; Kingsley, W. A., McDonald, A., Ramdeholl, J. E. R., Usher, W. C., equal ; Hurtubise, J. R., Connolly, N. W., Baker, J. O., equal ; Laing, A. V.; McDermott, J. P.; Beggs, W., Patterson, G. H., Kennedy, W. D., equal; McKinley, N. J., Kelly, J. M., Byers, J. C., equal; Bradley, R. M., Milburn, H. H., equal; Clancy, J. P. I., Scott, R. A., Ford, W. H., Little, Thomas, equal; Coulombe, P. O., Magill, A. L., equal; Thompson, G. H.; Hunter, G. H. V., Morrison, W., Cole, W. H., equal ; Hughes, R. A.; Cays, F. A.; Claxton, W. A.; Byrne, E. P.; Fraser, L. H.; Carmichael, S. V.; Duchesne, J. H.; Eby, D. M.; Galloway, J. E. B.
Bacteriology.-Usher, W. C.; Cotman, I. D.; Connolly, N. W.; Boyce, H. A.; Robb, D.; Curphey, A. G.; Dunlop, H.; Bradley, R. M., Kingsley, W. A., Milburn, H. H., Baker, J. O., equal ; Laidlaw, C.; Dawson, L. M. Carmichael, S. V., equal Donevan, F. J., Meyers, E. T., Connolly, H. A., Morrison, W., equal; Hughes, R. A., Casselman, S. B., Cole, W. H., equal; Ross, T. R., Fraser, L. H., McIntosh, F. B., Ramdeholl, J. E. R., equal ; Longmore, H. B.; Raymond, A. L., Cornett, W. F., Beggs, W., equal ; Costello, M. C., Hunter, G. H. V., equal ; MacDonald, A., Daley, T. V., Workman, H. C., equal ; McNamara, J. P., Sullivan, J. H., Patterson, C. A., Byers, J. C., equal; Scott, R. A.; Asselstine, B., Hurtubise, J. R., McCormick, A. M., equal ; Cameron, D. R., Kelly, J. M., equal ; Magill, A. L. ; Sargent, F. R., Goodfellow, T. J., Patterson, G. H., equal ; Massiah, J. H. ; Laing, A. V.; Stead, J. H.; Buck, L. L. ; Duchesne, J. H. McKinley, N. J., equal ; Coulombe, P. O. ; Keeley, F. J.; Ford, W. H. ; McDermott, J. P.; Clancy, J. P. I. ; Charbonneau, J. E., Byrne, E. P., equal; Allaire, Joseph; Kennedy, W. D. ; Lapierre, J. M., equal.
Senior Practice of Medicine-Quigley, J. P., Longmore, H. B., Boyce, H. A., equal; Laidlaw, C., Wightman, R., equal; Storey, G. E. ; McNamara, J. P.; Scott, R. A., Trousdale, F. H., equal ; Bowen, H. M.; McDonald, A.; Bennett, A. E. H. ; Spankie, A. T.; Donevan, F. J.; Spence, H. D. L.; Burke, M. L. ; Quinn, P. J. ; Johnston, A. C., Mills, R. M., equal; Sullivan, J. H., McDougald, W. L., equal ; Keeley, F. J., Asselstine, B., Casselman, S. B., Walker, M. J. O., Greaves, G. A., Brown, J. E., Thwaites, G. E., Paul, R. D., equal ; Kean, S. G.; McCormick, A. M.; Curphey, A. G.
Clinical Medicine.-Quigley, J. P.; Longmore, H. B., Boyce, H. A., equal ; Bennett, A. E. H.; Wightman, Robt. ; Burke, M. L., Scott, R. A., equal ; Laidlaw, C. ; Spence, H. D. L. ; Casselman, S. B., Trousdale, F. H., equal ; McDonald, A.; Asselstine, B., McNamara, J. P., Walker, M. J. O., equal;

Bowen, H. M., Curphey, A. G., equal ; Storey, G. E., Brown, J. E., equal ; Donevan, F. J.; McCormick, A. M.; Paul, R. D.; Johnston, A. C. ; Mills, R. M.; Greaves, G. A., Keeley, F. J., equal; Quinn, P. J., Kean, S. G., equal; McDougald, W. L.; Spankie, A. T.; Sullivan, J. H.

Senior Surgery.-Wightman, R.; Quigley, J. P.; Bennett, A. E. H., Trousdale, F. H., equal; Boyce, H. A.; Bowen, H. M., Quinn, P. J., Greaves, G. A., equal; Asselstine, B., Curphey, A. G., Keeley, F. J., equal ; Mills, R. M., Longmore, 'H. B., equal; Donevan, F. J., McNamara, J. P., equal; Brown, J. E., Spence, H. D. L., Casselman, S. B., equal ; Paul, R. D., Walker, M. J. O., McDougald, W. L., Laidlaw, C., equal; Sullivan, J. H., Burke, M. L., equal ; Spankie, A. T.; McDonald, A.; Storey, G. E., Scott, R. A., equal; McCormick, A. M.; Kean, S. G. ; Nicholls, R. F.; Thompson, A. Y., McCambridge, L., Johnston, A. C., Cays, F. A., equal; Duchesne, J. H: ; Thwaites, G. E.; Galloway, J. E. B.
Clinical Surgery.-Laidlaw, C., Quigley, J. P., equal ; Longmore, H. B., Wightman, R., equal ; Boyce, H. A., Trousdale, F. H., McNamara, J. P., equal; Spence, H. D. L., Bennett, A. E. H., Asselstine, B., Spankie, A. T., equal; Quinn, P. J., Scott, R. A., Nicholls, R. F., Paul, R. D., equal; McCormick, A. M., Bowen, H. M., Brown, J. E., Greaves, G. A., equal ; McDougald, W. L., McDonald, A., Curphey, A. G., Storey, G. E., equal; Burke, M. L., Casselman, S. B., Mills, R. M., Kean, S. G., Walker, M. J. O., Sullivan, J. H., Galloway, J. E. B., equal ; Thwaites, G. E., Keeley, F. J., equal ; Bond, H. E.; Donevan, F. J.; Johnston, A. C.

Senior Obstetrics and Gynaecology.-Quigley, J. P., Wightman, R., equal; Laidlaw, C., Boyce, H. A., McNamara, J. P., equal; Spankie, A. T.; Greaves, G. A., Keeley, F. J., equal; Trousdale, F. H.; Storey, G. E.; Brown, J. E., Paul, R. D., equal; Burke, M. L.; Quinn, P. J.; Bennett, A. E. H.; Scott, R. A., equal ; McDonald, A. ; Longmore, H. B. ; Donevan, F. J.; Bowen, H. M. ; Spence, H. D. L. ; Asselstine, B. ; Kean, S. G.; Casselman, S. B.; Sullivan, J. H. ; Curphey, A. G., McDougald, W. L., equal ; Johnston, A. C. ; Mills, R. M. ; Nicholls, R. F., Walker, M. J. O., equal; Galloway, J. E. B., Young, F. S., equal ; Thwaites, G. E., Carmichael, M. A., McCormick, A. M., equal.
Fourth Year Pathology.-Quigley, J. P.; Walker, M. J. O.; Trousdale, F. H.; Bennett, A. E. H.; McNamara, J. P.; Paul, R. D.; Spankie, A. T.; Boyce, H. A.; Storey, G. E.; Bowen, H. M., Wightman, R., equal; Laidlaw, C.; Asselstine, B., Casselman, S. B., equal ; Brown, J. E.; Curphey, A. G. ; Burke, M. L.; Donevan, F. J., Longmore, H. B., equal; Mills, R. M., McDonald, A., Quinn, P. J., equal ; McDougald, W. L., Spence, H. D. L., equal; Sullivan, J. H.;

Greaves, G. A.; Johnston, A. C.; Keeley, F. J., McCormick, A. M., equal ; Nicholls, R. F.; Scott, R. A.; Galloway, J. E. B.; Kean, S. G.; McCambridge, L. L.

Senior Medical and Surgical Anatomy.-Quigley, J. P.; Wightman, R.; Casselman, S. B. ; Scott, R. A.; Spankie, A: T.; McNamara, J. P.; Paul, R. D.; Trousdale, F. H.; Bennett, A. E. H.; Walker, M. J. O.; Bowen, H. M.; Mills, R. M., Keeley, F. J., Sullivan, J. H., equal ; Longmore, H. B., Boyce, H. A., equal ; Asselstine, B., Cays, F. A., Johnston, A. C., Galloway, J. E. B., Brown, J. E., Curphey, A. G., Storey, G. E., equal ; Kean, S. G. ; Quinn, P. J.; Laidlaw, C.; Spence, H. D. L., Donevan, F. J., equal ; Nicholls, R. F.; Burke, M. L., McCambridge, L. L., equal; McDougald, W. L.; Greaves, G. A., McDonald, A., equal ; McCormick, A. M.

Sanitary Science.-Kean, S. G. ; Quinn, P. J.
Eye, Ear, Nose and Throat.-Trousdale, F. H., Quigley, J. P., equal; McNamara, J. P., Longmore, H. B., Laidlaw, C., equal; Boyce, H. A.; Mills, R. M.; Wightman, R. ; Bennett, A. E. H., Storey, G. E., equal; Spankie, A. T.; Curphey, A. G. ; Bowen, H. M. ; Brown, J. E.; Greaves, G. A.; Scott, R. A.; McDonald, A.; Burke, M. L.; Casselman, S. B. ; Johnston, A. C. ; Keeley, F. J., McDougald, W. L., equal ; Donevan, F. J.; Quinn, P. J., Paul, R. D., equal ; Thwaites, G. E., Nicholls, R. F., equal; Kean, S. G., Sullivan, J. H., equal; Spence, H. D. L., Asselstine, B., equal ; Thompson, A. Y.; Cays, F. A.; McCambridge, L., Walker, M. J. O., equal; McCormick, A. M.; Carmichael, M. A.; Galloway, J. E. B.

## LIST OF STUDENTS.

Session 1906-1907.

## IN ARTS.

## Year of

NAME. Attend- Summer Residence. Where Educated.

| Aberhart, W | Brantford, |
| :---: | :---: |
| Aiken, Maybelle E. I | Kingston, Ont...... Kingston C. I. |
| Aiton, Agnes ..... 2 | Highland Creek... Markham H. S. |
| Akins, J. R....... . I | Winnipeg, Man.. . . Almonte H |
| Alberta, Sr. M.... 2 | Formosa, Ont. . . . . St. Mary's H. S. |
| Alford, Bernice ... 2 | Elgin, Ont........ Athens \& Brockville. |
| Alford, Ethel F.... 4 | Brockville, Ont..... Athens H. S. |
| Anderson, J. A..... 3 | Rossmore, Ont.. .. Albert C.I., Bellev'le. |
| Anderson, L. A.... I | Macoun, Ont....... Orillia C. I. |
| Angela, Sr. M..... 2 | Hamilton, Ont..... St. Joseph's Convent, Hamilton. |
| Anglin, Jennie M | Kingston, Ont..... Kingston C. I. |
| Anglin, Mary R. | Kingston, Ont. . . . . Kingston C. I. |
| Anglin, R. W. | Cork, Ireland .... Cork C. I. |
| Archibald, H. F.... I | Montreal, Que..... McGill Normal. |
| Ashe, Cecilia T.... I | Amherstburg, Ont. Convent of Mary Immaculate, Key West. Fla. |
| Ashman, G. H... | Ottawa .... ...... Carleton Place H. S. |
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| Atwater, H. E..... 3 | Baddeck, N.S..... Baddeck H. S. |
| Austen, Bessie .... 4 | Waterford, Ont.... Waterford H. S. |
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| Baldwin, P. M..... 2 | Gilbert Plains, Man.Crossley Sch., Halifax, England. |
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| Beech, Kenneth | Belleville, Ont..... Picton H. S. |
| Beecroft, W. A..... 4 | Woodville, Ont.. ... Lindsay C. I. |
| Belfry, Effie ....... 3 | Bradford, Ont. . . . Owen Sound C. I. |
| Benn, I. L. ....... I | Long Lake, Ont. |
| Bennett, Margaret. 4 | Lethbridge, Alta. |
| Bennett, W. P..... 3 | Kingston, Ont..... Kingston, C. I. |
| Benson, J. F. | Rednersville, Ont. . Picton H. S. |
| Bernath, A. | Huntsville, Ont.... Harriston H. S. |
| Bews, Jas. | Creelman, Sask.... Manitoba College. |
| Black, H. | Fergus, Ont....... Fergus H. S. |
| Blacklock, May | Glenburnie, Ont.... Kingston C. I. |
| Bland, C. H | Pembroke, Ont.... Pembroke H. S. |
| Bluett, C. | Crediton, Ont...... Forest H. S. |


| NAME. $\begin{gathered}\text { Year of } \\ \text { Attend- } \\ \text { ance. }\end{gathered}$ | Summer Residence. <br> Where Educated. |
| :---: | :---: |
| B | Kingston, Ont..... Kingston C. I. |
| Bothwell, N. D.... 2 | McGarry, Ont..... Perth C. I. |
| Bouck, C. D....... I | Morrisburg, Ont. . . Morrisburg C. I. |
| Bow, M. R........ 3 | Winchester, Ont. . . Morrisburg C. I. |
| Bowen, N. L...... 4 | Kingston, Ont. . . . . Kingston C. I. |
| Boyd, F........... 2 | Kingston, Ont..... Kingston C. I. |
| Branion, S | Wolseley, Sask..... St. Mary's C. I. |
| Brennan, J. B..... 4 | Toronto .... ..... Toronto C. I. |
| Brooker, Rosalie A. I | Yeovil, Ont........ Stratford C. I.; Durham H. S. |
| Brown, D......... 4 | Aylmer . . . . . . . . Kingston C. I. |
| Brown, A. H...... 3 | Varna .... ...... Toronto Univ. |
| Brown, H. W...... 4 | Berlin, Ont... . .... Harriston \& Berlin. |
| Brown, J. M....... 2 | Battleford, Sask... Morrisburg C. I. |
| Brown, Miriam W. I | Toront |
| Brown, R. W...... I | Kingston ......... Kingston C. I. |
| Brunet, G. A...... 2 | Roxton Falls, Que. Diocesan Coll. |
| Brunton, W. D.... 3 | Ottawa .......... Ottawa |
| Buchanan, J. A..... 4 | St. Catharines..... Parkhill H. S. |
| Burchill, A. M..... 4 | Bolton, Ont. . . . . . Hamilton C. I. |
| Burgess, W. H..... 2 | Tilbury, Ont...... Chatham C. I. |
| Burke, Laura ..... 2 | Yorkton, Sask.... Wapella Pub. Sch. |
| Burns, C. J. | Cannington, Ont. . Lindsay C. I. |
| Butler, Rose M | Amherstburg, Ont.. St. John's Academy, Schenectady, N.Y. |
| Burns, Mary | Hamilton, Ont..... National School. |
| Caldwell, T. N.... 2 | Gilchrist, Ont...... Barrie C. I. |
| Cameron, Gertrude. 2 | Morrisburg, Ont. . Morrisburg C. I. |
| Cameron, Katie. . I | Port Hope, Ont... . Port Hope H. S. |
| Campbell, N. W.... 4 | Durham, Ont |
| Campbell, W. M... 1 | Eganville, Ont.... . Renfrew H. S. |
| Carmelita, Sr...... I | Guelph, Ont....... . Loretto Abbey. |
| Carmichael, D. A.. 3 | Ferry Point, Alta . Markham H. S. |
| Casselman, F. C.... 2 | Arkona, Ont.. . . . . Forest \& Watf'd H.S. |
| Caverley, D. C..... 3 | Perley, Sask.. . ... Stirling H. S. |
| Chalmers, A. A | Copper Cliff, Ont. . Ottawa, C. I. |
| Chapman, W. F.... 4 | Toronto |
| Chandler, Pearl E.. 4 | Norwood, Ont. . . . Norwood H. S. |
| Charlesworth, J. W. 4 | Guelph, Ont........ Private Tuition. |
| Chisholm, H... ... I | Kingston, Ont. . . . . Huntsville. |
| Chown, Ada F..... 2 | Kingston $\ldots \ldots . .$. Kingston C. I. |
| Chown, S. G....... 2 | Montreal, P.Q.. . . Kingston C. I. |
| Clark, W. C. | Martintown, Ont... Williamstown H. S. |
| Clifford, Margaret. . 4 | Conroy, Ont....... Stratford C. I. |
| Closs, F. D........ 4 | Leamington, Ont... Aylmer C. İ. |
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| NAME. $\begin{gathered}\text { Year of } \\ \text { Attend- } \\ \text { ance. }\end{gathered}$ | Summer Residence. Where Educated. |
| :---: | :---: |
| Dorland, A. | Bloomfield, Ont..... Pickering Coll. |
| Douglas Anna L... 3 | Ottawa, Ont....... Ottawa C. |
| Downey, R. F..... 3 | Port Perry, Ont... Toronto Jct. C. I. |
| Doxsee, W. W..... 2 | Gravenhurst, Ont.. Gravenhurst C. I. |
| Doyle, Cora M.... 2 | Chicago, Ill... .... Chatham C. I. |
| Doyle, D. J......... I | Wayside, Ont...... Perth C. I. |
| Drumm'd, Helen M. I | Toronto, Ont.. . . . . Moulton Col.,Toronto |
| Dunham, C. S..... 4 | Frankville, Ont.... Athens H. S. |
| Dunkerley, Cora F. 3 | Quebec, P.Q.. . . . McGill Normal. |
| Dunlop, Ethel I... I | Kingston ......... Kingston C. I. |
| Dunlop, Florence M. 5 | Kingston ......... Kingston C. I. |
| Dunn, J.......... I | Kingston . . . . . . . Alloa \& Dollar Acads. |
| Dupuis, Ethel ..... I | Kingston . . . . . . . Kingston C. I. |
| Dwyer, W. O..... 4 | Kingston ......... Kingston C. I. |
| Easson, R. C | Stratford . . . . . . . Stratford C. I. |
| Edward, F. W..... 2 | Woodstock, Ont... Goderich C. I. |
| Elliott, C | Cataraqui, Ont.... . Kingston C. I. |
| Elliott, Emily M... 5 | Agincourt, Ont.... Markham H. S. |
| Elliott, Gertrude .. 2 | Kingston . . . . . . . Kingston C. I. |
| Elliott, Henry E... 4 | Forest, Ont........ Forest H. S. |
| Elliott, Jennie .... 2 | Arnprior, Ont...... Arnprior H. S. |
| Ellis, D.... ...... 5 | Kingston . . . . . . . Kingston C. I. |
| Ellis, Mima A..... 4 | Pakenham, Ont.... Almonte H. S. |
| Ellis, R. J......... 4 | Saltcoats, Sask..... Athens H. S. |
| English, J. W...... 4 | Mimico, Ont. |
| Estelle, Sr. M..... I | Chicago, Ill........ . Loretto Conv., Guelph |
| Ettinger, J. G..... 4 | Kingston . . . . . . . . Listowel |
| Eyre, B........... 2 | Kingston |
| Fallis, L. K. | Toronto .......... P |
| Fargey, Agnes M.. 3 | West Huntingdon.. Stirling H. S. |
| Fear, T. E......... 3 | Brandon, Man. ... Man. Coll. |
| Feasby, W. J...... 4 | Nutana, Sask. .... Harbord St. C. I. |
| Feę, D. L, ........ I | Alexandria, Man. |
| Ferguson, D. A.... 2 | Winnipeg, Man. |
| Ferguson, Eleanor. 3 | Ottawa ........... Whitby Ladies' Coll. |
| Ferguson, J. D..... 4 | Carleton Place .... Carleton Place H. S. |
| Ferguson, J. J..... 4 | Kingston . . . . . . . . Galt C. I. |
| Ferguson, J. L..... I | Oil Springs ....... Chesley H. S. |
| Ferguson, W. P.... 3 | Osnabruck Centre.. Morrisburg C. I. |
| Fife, G. S........ 2 | Peterboro ........ Peterboro C. I. |
| Fleming, R. W.... 2 | Watford, Ont...... Watford H. S. |
| Fleming, W. A. | Alliston ......... Brampton H. S. |
| Flynn, T. A........ 4 | Morrisburg, Ont... Morrisburg C. I. |
| Fokes, A. F....... 4 | Perth Road, Ont... Kingston C. I. |
| Foley, D. E........ 3 | Westport, Ont...... 1. ....emems. . |

## Year of <br> NAME. Attend- Summer Residence. . Where Educated. ance.

| Foley, R. S........ 3 | Tilley P.O........ . Kingston C. |
| :---: | :---: |
| Forgie, J. M....... | Pembroke, Ont..... St.Andrew's Coll,Tor. |
| Forrester, J. W.... 3 | Westport . . . . . . . Athens H. S. |
| Foster, D. E....... 3 | The Grange, Ont.. . Brampton H. S. |
| Foster, Jessie ..... 3 | Welland, Ont...... St. Catharines C. I. |
| Fraser, D. J....... 4 | Whitby .. ....... Whitby C. I. |
| Fraser, G. L. . . . . . 2 | Bradford, Ont. . . . Bradford H. S. |
| Fraser, J. C | Gore Bay ........ Gore Bay H. S. |
| Fraser, R. C. | Rosemount, Sask... |
| Fuller, E. L. . . . . . 4 | London . . . . . . . . . London C. I. |
| Gall | Kilmarnock, Scot.. Scotland. |
| Gardiner, J. N..... 3 | Kingston . . . . . . . Kingston C. I. |
| Gardiner, W. H.... I | Burlington, Ont.... Waterdown H. S. |
| Garner, J. H....... I | Kincardine, Ont. |
| Gaskin, J. D | Kingston . . . . . . . Renfrew H. S. |
| Gibson, J. W...... 3 | Kars. Ont......... Kemptville H. S. |
| Gibson, A. H...... 4 | Lacombe, Alta... .. Perth C. I. |
| Gilbert, A. V. | Kingston . . . . . . . Kingston C. I. |
| Gilchrist, W. A.... 3 | Glamis, Ont. . . . . . Kincardine H. S. |
| Gilson, Rose E..... 2 | Meaford, Ont...... Meaford H. S. |
| Gillie, Ruby V. | Kingston ......... Convent. |
| Girdler, Win. A. M. 2 | Kingston ......... Kingston, C. I. |
| Goodfellow, T. J... 4 | Parham, Ont. ..... Sydenham H. S. |
| Goodwin, Edith C.. 2 | Kingston . . . . . . . Kingston C. I. |
| Gorman, W. J . | Killaloe Stn., Ont.. Renfrew C. I. |
| Gourlay, Mary I. | El Dorado, Ont.... Whitby |
| Graham, C. R..... 3 | Arnprior, Ont..... Arnprior H. S. |
| Graham, D........ I | Ripley, Ont. . . . . . . Ridgetown C. I. |
| Grass, Margaret F. 6 | Kingston . . . . . . . . Kingston C. I. |
| Grasse, Mary A. M. I | Collins Bay....... Kingston C. I. |
| Gravelle, F. W..... 3 | Portsmouth, Ont. . . Regiopolis Coll. |
| Gray, J. R......... | London, Ont...... . London C. I. - |
| Greene, Edith M... 4 | Brockville, Ont.... Brockville C. I. |
| Greer, A. G....... 2 | Peterborough .. . . Peterborough C. I. |
| Greer, V. K........ 1 | Tweed, Ont. . . . . . . Morrisburg C. I. |
| Grover, J. I........ . 4 | $\begin{gathered} \text { Kingston } . . . \ldots \text { Trinity Coll. School, } \\ \text { Port Hope. } \end{gathered}$ |
| Hague, Hilda L.... I | Kingston . . . . . . . Kingston C. I. |
| Haight, Annie .... 2 | Picton, Ont... .... Picton H. S. |
| Hall, Margaret M. 2 | Kingston . . . . . . . Kingston C. I. |
| Hall, W. T........ 2 | St. Thomas, Ont... St. Thomas H. S. |
| Hamilton, J. R.... 3 | Portsmouth, Ont... Berlin H. S. |
| Hammond, J. E... 2 | Meaford, Ont..... . Meaford H. S. |
| Hampson, E....... 3 | Ottawa, Ont....... Mt. Forest H. S. |
| Hanna, E.......... 4 | Toronto ......,.... Harbord St. C. I. |
| Harcourt, Anna.... I | Morden, Man. |



Attend- Summer Residence Where Educated. ance.

2 Comber, Ont....... Barr C. I.
Kennedy, P. J...... 2
Kennedy, W. W.... 2
Kerr, M............. 5
Kidd, T. W........ 2
King (Mrs.) Estelle 2
King, G. A......... 3
Kingston, H. R..... 3
Kinsella, M. D. B.. I
Kirkpatrick, W. H. 3
Klugh, A. B.
Knight, A. E...... I
Knowles, R. W.... 2
Lachance, Gert. M. I
Laing, A.... ...... 4
Laing, Margaret A. I
Lake, Ethel M..... 3
Lake, Mabel A.... 2
Lamb, W. J........ 2
Lane, D. J......... 3
Langs, W. O...... I
Lauder, Beat. G... I
Laughton, H. V. W. 3
Lawrence, C. W... 4
Leadbeater, W. R.. I
Leitch, H. D...... I
Leslie, Anna ....... I
Letherland, A...... 4
Lewis, S. R........ 2
Liggett, R. H....... 3
Lioba, Sr. Mary... 2
Lipman, A.......... 3
Little, A. M........ 3
Little, J.............. I
Livingston, C. W.. 4
Lord, A. R.......... I
Losee, W. H........ 2
Loudon, T. G..... 2
Low, Constance M. 5
Lucilla, Sr. Mary.. I
Lynd, L. E......... 4
Madden J. L....... 2
Mahony, W. J..... I
Maisonville, H. C.. 3

Portsmouth, Ont... Athens H. S.
Stratford, Ont..... St. Mary's, Winnipeg, Man.
St. Thomas, Ont.. Jarvis St. C. I.
Chatham, Ont...... Kemptville H. S. New Westminster.
New Westminster. Walkerton H. S.
Picton, Ont........ Bradford H. S.
North Bay, Ont... North Bay H. S.
Bradford, Ont.....
Kingston
Montreal, P.Q..... Harrison Coll., Barbadoes.
Fullarton, Ont..... Ireland Academies.
Drysdale, Ont...... Kingston C. I.
Baltimore, Ont.
Baltimore, Ont..... Port Hope H. S.
Silver Grove, Sask. Sydenham H. S.
Kingston ......... Kingston C. I.
Walkerton, Ont.... Walkerton H. S.
Kinlough, Ont. . . . . Walkerton H. S.
Collins Inlet, Ont. . Private study.
Thedford, Ont..... Forest H. S.
Parkhill, Ont.. . .. . Parkhill H. S.
Smyrna, Turkey .. Leicester Acad., Mass.
Ellisville, Ont...... Athens H. S.
Sonya, Ont.
Esquesing, Ont..... Georgetown H. S.
Elginburg, Ont..... . Kingston C. I.
Carleton Place, Ont. Carleton Place H. S.
Garden Hill, Ont.. Millbrook, Ont.
Berlin, Ont......... St. Mary's H. S.
Kingston ............Kingston C. I.
Kingston .......... Listowel H. S.
Carnduff, Sask..... Galt C. I.
Kingston, Ont..... Kingston C. I.
Grafton, Ont....... Cobourg C. I.
Collins Bay, Ont... Kingston C. I.
Cambray, Ont.
Ottawa, Ont....... . Kingston C. I.
Toronto, Ont...... Loretto Abbey, Tor.
Fennells, Ont. . . . Univ. Coll., Toronto.
Kingston, Ont..... Regiopolis College.
Lilyfield P.O., Man. London, Eng.
' Toronto ,Ont. . . .-. . Windsor C. I.

| NAME.Year of <br> Attend- <br> ance. | Summer Residence Where Educated. |
| :---: | :---: |
| Malloch, T. A..... 3 | Hamilton, Ont..... Highfield School, Hamilton. |
| Mallen, L......... 4 |  |
| Marguerite, Sister.. 2 | Hamilton, Ont..... Convent. |
| Marlin, L. A...... I | Owen Sound, Ont.. Barrie C. I. |
| Marshall, Mabel .. I | Kingston, Ont. . . . Kingston C. I. |
| Matheson, M... ... 4 A | Armow ........... Kincardine H. S. |
| Matthews, Jessie E. 4 | Almonte, Ont...... Almonte H. S. |
| Mattoch, Maude ... 4 | Almonte, Ont.. .... Almonte H. S. |
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| Menzies, A. P..... 2 | Ottawa .......... Ottawa C. I |
| Middleton, Bessie . I C | Gananoque, Ont.... Gananoque H. S. |
| Millar, Edna A.... 4 | Brockville, Ont.... Brockville C. I. |
| Miller, Nan. M. A.. I | Orillia, Ont........ Port Rowan H. S. |
| Miller N... ....... 1 | Aylmer, Ont.. .... Aylmer C. I. |
| Miller, R. R | Haileybury, Ont. . Mount Albert P. S. |
| Milliken, J. B... . . 4 | Strathroy, Ont..... Strathroy H. S. |
| Mills, A. L. S...... I | St. Alban's, BrockKingston ......... ville, and tutor. |
| Mills, Frances W.: 4 | Kingston . . . . . . . Kingston C. I. |
| Mills, T. S........ I | Kingston . . . . . . . Kingston C. I. |
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| Mitchell, Bonnie .. I | Ottawa . . . . . . . . . . Ottawa Ladies' Coll. |
| Mitchell, Edna-... 4 | Kingston ......... Kingston C. |
| Moffat, W. J..... . 4 | Seaforth, Ont...... Owen Sound C. I. |
| Moore, J. L....... 4 | Toronto, Ont...... Parkdale C. I. |
| Morrison, W. R... 2 | Ormstown, P.Q.... Montreal, P.Q. |
| Morton, Marion .. 2 | Aberdeen ......... Bentick \& Durham H. S. |
| Mott, M. W....... 1 | Belleville. . . . . . . Belleville H. S. |
| Mount Carmel, Sr.. 2 | St. Joseph's Conv |
| Muir, Jessie ...... 4 | Almonte, Ont...... Arnprior H. S. |
| Murchison, J. K... I | Grand River, C. B. St. Peter's Acad. |
| Murray, G. M...... I | Cleveland, Ohio ... Glenville H. S., Cleveland, O. |
| Macarthur,Annie M. 4 | Washburn, Ont.... Kingston C. I. |
| Macarthur, Don. A. 3 | Cardinal, Ont. ... . Ottawa Ladies' Coll. |
| McArthur, D. A... 3 | Dutton, Ont....... . Dutton. |
| McAskile, J........ 4 | Carleton Place .... Carleton Place H. S. |
| McCraton, R. J.... I | Highgate ......... . Ridgetown C. I. |
| McCallum, J. F.... 4 | Brewer's Mills .... Gananoque H. S. |
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Gillette, O ........ . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . Kingston
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Hubbard, D. W
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Nicol, D. S.
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Sills, 0
Simmons, G
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MacDonald, Arch
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Shaw, J. G.
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Whinton, W. E. H ..... Kingston
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Wickware, B. L ..... Toledo
Wickware, A. B ..... Morrisburg
Wightman, R ..... Lancaster
Wise, H. T Dafoe, Mich.
Workman, H. C. Kingston

## RHODES SCHOLARS.

1905-1908.

Macdonnell, James, nominated by Queen's University.
1906-1909.

Bothwell, A. M., nominated by Alberta.
Cameron, A. G., nominated by Prince Edward Island.
1907-1910.

Macdonnell, N. S., nominated by Queen's University.

## ARTS HONOUR LISTS FROM 1877 TO 1907.

Alcombrack, R. W., Greek II, '96; Latin II, '97.
Alford, Ethel, French II, '07; History I, '07.
Aikin, J. A., Philosophy I, '04; Political Science I, '03.
Allen, J., Mathematics I, '04.
Allen, Maggie D., Botany I, '93; Geology I, '93; Zoology II, '93; Histology II, '93.
Allen, T. G., Natural Science I, '88.
Anderson, F. C., Animal Biology II, '00; Botany I, '00.
Anderson, P. McC., History I, '03; Political Science I, '03.
Andrews, D., Mathematics I, '04.
Anglin, F. R., German II, '94; French II, '95; Italian II, '94.
Anglin, Jennie M., English III, '0\%.
Anglin, R. W., Mathematics I, '97.
Anning, N. H., Mathematics II, '05.
Anthony, J., Political Science III, '98; Philosophy I, '00.
Arthur, C. C., Chemistry I, '91; Botany I, '91; Zoology I, '91.
Arthur, Leona M., French I, '07.
Asselstine, E. B., Mathematics, I, '05.
Asselstine, Elizabeth C., German I, '04; French I, '05.
Asselstine, F., Botany I, '97.
Attwood, A. E., Animal Biology II, '95; Botany I, '95.
Ayers, M. H., Botany I, '04; Biology I, '04.
Baird, A. W., English I, 07.
Bajus, Carrie, French I, '01; German II, '01; English III, '01.
Baker, H. M. ; Botany I, '91; Zoology I, '91; Geology I, '91.
Baker, M. B., Chemistry II, ' 00 ; Geology I, ' 00.
Baker, W. C., Chemistry I, '95 ; Mineralogy I, '95 ; Physics II, '97.
Baker, W. R., Botany II, '96.
Barclay, W. B. C., Latin II, ' 88 ; English Literature and History II, '88.
Barker, J., English III, '99; French II, '01.
Barnard, A. T., Latin I, '99; English III, '99; Philosophy (partial course) I, '07.
Barr, Janet, Italian II, ' 94 ; French III, ' 00 ; German III, ' 00 ; English III, ' 00.
Bates, C. J. L., Philosophy I, '01.
Beall, A. W., Latin I, '88; Moderns I, '88.
Beaton, A. H., History I, '94; Political Science II, '94.
Beaton, K., English III, '97; Latin II, '96.
Beckett, S. E. J., Moral Philosophy I, '04; Political Science I, '05.
Beecroft, A., English III, '07.
Belfour, P. F., Chemistry II, '99 ; Mineralogy II, '99.
Bell, J. M., Biology I, '99; Chemistry I, '99.
Bellamy, Mabel, English III, '00.
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Bennett, W. C., Greek III, '97; Latin II, '95.
Bennett, W. H., Latin III, '00; Greek III, '01.
Berlanquet, H. S., Latin II, '96; Greek II, '96,
Berney, Laura, French III, '05.

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Best, Isabella M., English II, '00; French II, '00; German I, '01.
Billings, T. H., Latin I, '01; Greek I, '02.
Binnie, J., Political Economy I, '88; Philosophy II, '88.
Black, B. S., Latin I, '03; Greek II, '04.
Black, H. H., Latin I, '98; Greek I, '99.
Black, Jean, B., German III, '03; English III, '04.
Black, N. F., German III, '05; French I, '05; English I' '05.
Bloor, W. R., Botany I, '02; Animal Biology I, '02.
Boak, A. E., Greek I, '07.
Boddy, Martha, Systematic Mineralogy (only), '93; Zoology II, '93; Histology I, '93; Geology I, '94.
Boland, W. A., English I, '05; Political Science I, '05.
Bolton, L. L., Mineralogy I, '03; Geology I, '03.
Bothwell, A. M., French I, '05; History I, '05.
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Brown, P. W., Botany I, '04.
Bryan, H. W.; Latin II, '94; Greek I, '94.
Bryant, J. F., Latin III, '01; Greek III, '01.
Brydon, R., Latin I, 'o5; Greek II, 'o5.
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Burgess, H. H.. History I, '96.
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Duncan, T. S., Latin I, '04; Greek I, '04.
Dunham, C. S., Histology III, '07.
Dunkley, A. W., Latin I, '98; Greek I, '99.
Dunkley, W. G., Chemistry II, '02; Mineralogy III, '02.
Dunlop, Florence M., English II, '07.
Dunlop, J. G., Moderns I, '86; English Literature and History II, '87.
Dupuis, J. M., Chemistry I, '79.
Durie, C. L., English II, '99; Political Science I, '99.
Dwyer, J. G., Mathematics II, '02.
Dwyer, W. O., Mathematics I, '07.
Dyde, G. E., English II, '93; Greek I, '89; Latin II, '89.
Dyde, S. W., Classics I, '81; Philosophy I, '84.
Easson, R. E., Botany I, '07.
Easton, W. H., Philosophy I, '93.
Edmison, G. A., Political Science II, '00.
Edwards, C. B., English II, '99; History II, '99.
Elder, Hosie, Political Science I, '04; English I, '05.
Elliott, E., English II, '86; History I, '86; Moderns II, '86.
Elliott, Emily M., English II, '07.
Ellis D., Mathematics II, '07.
Ellis, R. J., Physiology and Histology III, '0\%.
Ettinger, J. G., German II, 'o5.
Ewing, Florence M., French II, '03; English III, '03.

Ewing, W. C., Animal Biology I, '95; Botany I, '95.
Fairlie, J., Mathematics II, 'o5.
Farquharson, R. A., Moderns III, '97.
Farrell, T. H., Mathematics I, '89.
Feasby, W. J., German I, '07; French II, '07.
Fee, W. M., Philosophy I, '99.
Fenwick, A. M., Botany I, '90; Zoology I, '90; Geology I, '90.
Ferguson, Eleanor, German II, '07.
Ferguson, J. J., History I, '07.
Ferguson, R., English Literature and History I, '82.
Ferguson, W. P., Experimental Physics I, 'U7.
Ferguson, T. R., Mathematics I, '04.
Fetterly, H. B., Chemistry I, 'o5.
Findlay, J., Mathematics I, '87; Philosophy I, '90.
Finley, W. A., Greek I, '88; Latin I, '88.
Firth, W. P., Chemistry I, '01.
Fitzgerald, Eliza S., Greek I, '84; Latin I, '84.
Fitzpatrick, A., English II, '95.
Flath, Emma, French III, '02; German III, '02.
Fleming, Maude, French I, '03; English III, '03; Italian II, '02.
Fleming, W. S., History III, '04; Political Science III, '05.
Fletcher, W. H., Botany I, '02 ; Animal Biology I, '02.
Foik, H. J., French II, '02; German I, '02.
Folger, Marion, Moderns I, 's6.
Ford, A. B., Chemistry II, '93; Zoology I, '93; Histology I, '93.
Forfar, Lena M., Political Science II, '03.
Forrester, J. W., Botany I, '07.
Fowler, H. C., English Literature and History, '81.
Fox, C. B., Chemistry I, '94; Histology I, '94; Zoology II, '93.
Fraser, Annie E., English I, '95.
Fraser, J. R., Philosophy I, '93.
Fraser, T., English I, '97; Latin III, '98.
Froats, Jas., Botany I, '07; Animal Biology II, '07.
Froats, W. C., Greek I, '03; Latin I, '04.
Furlong, T. H., Botany I, '97; Animal Biology I, '97.
Gallup, E. C., English II, '92.
Gandier, A., English Literature and History I, '83; Philosophy I, '83.
Gandier, J. C., Latin II, '01; Greek II, '01.
Gardiner, S. H., Chemistry I, '86; Natural Science I, '86.
Gavin, F. P., Botany I, '96; Animal Biology II, '96.
Geddes, R. W., Latin II, '96; Greek II, ' 96.
Gibson, A. H., Philosophy III, '07.
Gibson, J. C., Mathematics I, '92.
Gibson, J. W., Animal Biology I, '07.
Gilfillan, J., Botany II, '96.
Girvin, H. G., Mineralogy II, '01.
Givan, A., Mathematics I, '83.
Givens, D. A., Mathematics I, '78.
Gober, Mai, English I, '98; History I, '99.

Goodfellow, J., English III, '97.
Goodfellow, T. J., Physiology and Histology III, '07.
Goodwill, J. E. L., History II, '03; Political Science II, '03.
Gordon, Wilhelmina, Latin I, '04; English I, '05.
Gould, W. H., Mathematics I, '00.
Graham, P. E., French I, '98; German I, '98; Italian II, '98; English III, '98.
Graham, C. R., Latin I, '07.
Grange, W. A., Political Science II, '98.
Grant, Ethel, German II, '03; French III, '03.
Grant, J. G., Mathematics II, '02.
Grant, W. L., Latin I, '94; Greek I, '94.
Gray, J. M., English II, '02.
Gray, S. H., Latin II, '94; Greek II, '94.
Grey, Stearns, English I, '03; History I, '03.
Grenfell, Caroline, Italian II, '97; German III, '99; French III, '99; English III, '99.
Grenfell, M. Elizabeth, Italian I, '98; French II, '99; German II, '99; English III, '99.
Grey, S., History II, '02.
Griffin, E. S., Latin II, '89; Moderns II, '89.
Griffith, Agnes J., English I, '95; Moderns I, '96.
Griffith, Edna B., Mathematics II, '96.
Grove, W. G., Mathematics II, 'o5.
Guess, G. A., Zoology I, '93; Histology I, '93.
Guess, H. A., Chemistry I, '95; Mineralogy I, '95.
Guggisberg, W., Political Science I, '04.
Guy, R. D., Chemistry I, '05; Mineralogy I, '05.
Hadden, A. T., Philosophy III, 'o5.
Hagan, J. W., Botany I, '03; Animal Biology I, '03.
Haig, A., Chemistry II, ' 88.
Hales, J., Chemistry I, '88; Philosophy II, '89.
Hall, J. R., Political Science II, '96; Philosophy I, '98.
Hall, T. F., Latin I, '04.
Hamilton, C. F., English Literature I, '90; History I, '90.
Hanna, E., French II, '07.
Harper, A. M., History I, ' 00 ; Political Science II, '00.
Hartwell, G. E. ; Greek II, '88.
Harvey, K., Italian II, '94; French II, '95.
Hawes, Ida, German I, 'o5; French I, 'o5.
Hawley, A. T., Latin I, '99; Greek I, '99.
Hay, A. G., Political Economy I, '88; Philosophy II, '89.
Hay, J., Philosophy I, '82 ; Political Economy I, '84.
Hay, W. M., French I, 'o5; English III, '05.
Haydon, A., English I, '93; History I, '93; Political Science I, '93.
Hazlett, J. W., Chemistry II, '01.
Heap, F., Greek I, '90; Latin I, '90.
Henderson, G. F., English Literature I, '84.
Henderson, M., Political Science III, '00; English III, '01.

Henstridge, Eliz., English I, '96; History I, '97; French II, '00; German III, '00.
Herbison, R., Greek II, '94; Philosophy I, '96.
Herbison, W. J., English II, '95 ; Political Science II, '95.
Herchmer, Ethel M., English I, '01.
Hermiston, G. M., History II, '95.
Hewton, Gertrude, English I, '02; German I, '03; French II, '05.
Hill, J., Geology II, '07.
Hiscock, May, History III, '07.
Hiscock, Reta, German III, '05; French III, '05.
Hiscock, R. C., Petrography and Economic Geology II, '96; Chemistry I, '96; Mineralogy II, '96.
Hoppins, L. W., Animal Biology III, '02.
Hord, A. H., English I, '01.
Horsev, H. E., Mathematics I, '86.
Houser, W. H., Mathematics II, '07.
Houston, J. A., Animal Biology III, '07.
Hughes, Ada, German III, '07; French III, '07.
Hugo, F., English I, '93; Political Science I, '93; History I, '94.
Hume, J. P., Mathematics I, '81; Chemistry I, '81.
Hunter, J. McF., English Literature and History I, '86.
Hunter, R. F., History I, '96; English I, '97.
Hunter, W. R., Animal Biology I, '00.
Hutchison, R. A., Mathematics I, '04.
Hutcheson, R. J., Latin I, '92; Greek I, '92.
Ingall, E. E., English III, '03.
Instant, F. P., English II, ' 06.
Ireland. F. A. W., Greek I, '91; Latin I, '91; English Literature I, '91.
Irvine, R., Latin II, '81.
Irvine, William H., Mathematics I, '77; Physics I, '77.
Irving, W. G., Political Science II, '94.
Jackson, Fannie, German I, '04.
Jackson, V. W., Botany I, '03; Anima1 Biology II, '03.
Jameson, Georgina, French I, '99; German I, '99; English I, '99.
Johns, C. P., French I, '96; German II, '96; Italian II, ' 96 ; English II, ' 96.
Johnson, D. B., English III, '01; History II, '01.
Johnston, J. K., Animal Biology I, '97; Botany I, '97.
Johnston, J. R., English Literature and History II, '82.
Johnston, J. W., Botany I, '94; Animal Biology II, '94.
Johnston, W. A., Latin I, '03; Greek I, '03.
Kayler, W. B., Histology II, '93.
Keillor, James, English III, '00; History I, '00.
Kellock, J. McC., English Literature I, '92; History I, '92.
Kellock. W. McC., English II, '96; Political Science II, '96.
Kemp, W., French I, '98; German I, '98; Italian I, '98; English I, '99.
Kennedy, A., Mathematics I, '01.
Kennedy, A. H., English I, '03.

Kennedy, T., Mathematics I, '99.
Kerfoot. H. W., Latin II, '00.
Keys, S. J., History III, '03.
Kidd, A., History II, '04.
Kidd, A. J., Political Science II, '05.
Kidd, C. E., English II, '02 ; Political Science, II, '03.
Kilborn, O. L., Chemistry I, '87.
King, F., Mathematics I,' 89.
King, W. W., Latin I, '95; Greek I, '95.
Kirkland, W. S., Botany I, '98; Biology I, '98.
Knapp, E., Animal Biology I, '05; Chemistry I, '05.
Knight, C. W., Geology III, '04.
Laing, A., Philosophy III, '07.
Laing, Mabelle, German III, '03; French III, '03.
Laird, Annie, L., English II, '00; French II, '01; German II, '01
Laird, D. H., Latin I, '98.
Laird, R., Latin I, '92; Greek I, '92 ; Philosophy I, '95.
Lang, G. R., Philosophy II, '96.
Langford, T. E., Botany I, '98; Biology II, '98.
Lavell, C. F., History I, '93; Political Science I, '94.
Lees, R., Botany I, '90; Zoology I, '90; Geology I, '90.
Lett, R. M., English Literature II, '89; History I, '89; Moderns II, '89.
Lewis, L. L., French II, '99; German II, '99; Italian I, '99; English II, ' 00.
Leibner, E., Animal Biology III, '00; Botany I, '00.
Lindsay, C. V., History I, '99; Political Science I, '00.
Lindsay, E., History II, '96.
Lindsay, Muriel, English III, '07.
Linton, A. R., Classics I, '80; Philosophy I, '81.
Lockhart, T. J., Zoology I, '91.
Lochead, W. M., History I, '97 ; Political Science I, '98.
Logie, W. A., Greek I, '87; Latin I, '87.
Loucks. J. E., English III, '01; History II, '01.
Low, Constance M., English III, '07.
Lowe, W. D., Latin I, '01; Greek I, '01; English I, '04.
Malcolm, G., History II, '92.
Malcolm, L., Mathematics I, '05.
Malone, Edith, French I, '99; German I, '99; Italian I, '99; English I, '00.
Malloch, G. S., Greek II, '02 ; English II, '02.
Marquis, T. G., English Literature I, '91.
Marshall, J., Philosophy I, '87; English Literature I, '91.
Marshall, J. W., Latin III, '98.
Marshall, W. F., Political Science I, '98; English I, '98.
Marty, Aletta E., Moderns I, '93; English II, '94.
Marty, Sarah E., Moderns I, '96; English I, '97.
Mason, G. W., History I, '02 ; Political Science I, '02.
Matheson, J., Mathematics I, '01.
Matheson, M., English III, ' 0 '7.

Matthews, S. W., Mathematics I, '97.
May, H. P., History I, 'o5.
Meade, R., Botany I, '96; Animal Biology I, '96.
Meiklejohn, A. J., English II, '98.
Meldrum, G. E., History I, '07.
Menish, Janet I., Moderns II, '95; English II, '95.
Menzies, R. D., Chemistry II, '95; Animal Biology I, '96.
Michell, Kathleen, English I, '05.
Might, L., Biology I, '04; Chemistry I, '04.
Millar, Edna, German II, '07.
Millar, J., Pol. Science I, '89; Philosophy I, '91; English I, '93.
Millar, J. M., English I, '93.
Millar, J. L., English II, '95; Political Science II, '96.
Miller, Eva M., French III, '01; German III, '01; English II, '02.
Miller, J., English Literature and History II, '86; Moderns II. ' 86.
Miller, J. D., English II, '96; Political Science II, '96.
Millions, Edna, French III, '99; German III, '99.
Mills, J. H., Greek I, '89; Latin I, '89.
Mills, Rhoda, Latin III, '98.
Minnes, R., Mathematics I, '89.
Misener, Geneva, Latin I, '98; Greek I, '99.
Mitchell, G. A., Philosophy II, '99.
Mitchell, G. W., Greek II, '85 ; Latin II, '85.
Mitchell, J. V., Mathematics III, '03.
Mitchell, S. A., Mathematics I, '94; Physics I, '95.
Moffat, W., Qualitative Analysis (only) I, '93; Zoology I, '93; Histology I, '93; Botany I, '94; Animal Biology I, '94.
Moore, J. R., Botany I, '96; Animal Biology I, '96.
Moore, Margaret B., English III, '04.
Morden, D. N., History I, 'o5.
Morden, G. W., Chemistry I, 'o5.
Morgan, J., Animal Biology III, '00; Botany II, '00.
Morrison, A. S., History I, '97; English III, '98.
Morton, Alice, Mathematics I, '99.
Mowat, A., English III, '00.
Mowat, J. McD., English II, '94; Political Science I, '95.
Mudie, Ethel, English III, '99; History I, '99.
Munro, H. B., English III, '98; History I, '98.
Munro, Margaret, German III, '04; French II, '05.
Munro, Maud E., French II, ' 96 ; Italian I, ' 96 ; German II, ' 99 ; English III, '99.
Munro, P. F., Latin I, '03; Greek I, 'o5.
Munro, W. B., History I, '95; Political Science I, '96.
Murphy, G. B., English III, '04; Political Science I, '04.
Murphy, Isabella, English I, '01; History I, '01.
Murray, D. C., Animal Biology I, '00; Botany I, '00.
Murray, Minnie, Philosophy I, '94.
McArthur, Annie, German II, '07; French III, '07.
McArthur, D. A., Political Science I, '07.
McCaig, J., English II, '96.

Macalister, Ursilla, Latin I, '00; English I, '00; French II, '01; German II, '01.
$\mathrm{McCallum}, \mathrm{A}. \mathrm{B.} ,\mathrm{Philosophy} \mathrm{I}, \mathrm{'80}$.
McCallum, J. A., English II, '00.
McCallum, J. F., Political Science II, '07.
McCallum, S., Chemistry I, '03; Mineralogy I, '03.
McClement, W. T., Chemistry I, '87; Natural Science I, '88.
McColl, A. E., Mathematics II, '85.
McColl, J. A., English I, '94; Political Science I, '95.
McConachie, J. C., Political Science II, '02.
McConkey, Eva, History III, '0.5.
McConkey, Kate, German III, '03; French III, '03.
McCormack, Irene, French III, '04.
McCormack, M., French I, '01; German II, '01. •
McCormack, S. G., German I, '03; French I, '03.
McCreary, R. N., Animal Biology I, '95; Botany I, '95.
McCrimmon, Annie L., French II, '02; German II, '02 ; English III, '02.
Macdonald, Geo., Classics I, ’78; Philosophy I. '78; English Literature and History I, '78.
McDonald, J., Latin I, '92; Greek I, '92 ; English I, '01.
McDonald, J. F., Latin I, '99; Greek I, '00; English I, '99; Political Science I, '01.
McDonald, N., English II, '00.
McDonald, Norval, French III, '99; German II, '99.
McDonald, R. J., English I, '07; Philosophy (partial course)

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\mathrm{I},{ }^{\prime} 07 .
$$

Macdonnell, G. F., Latin I, '93; Greek I, '93.
Macdonnell, J. M., Greek I, '04; Latin I, 'o5.
Macdonnell, J. S., Latin I, '99; Greek I, '99.
Macdonnell, Logie M., Greek I, '02; English I, '04.
Macdougal, C. A., Latin II, '95; Greek II, '95.
McDougall, F. H., Chemistry I, '02 ; Mineralogy I, '03.
McDougall, J. B., Latin II, '96; Greek II, '96.
McDougall, L. M., Philosophy I, '05.
McDowall, E., History II, '96.
McEachran, J. M., Philosophy I, '02.
MacEwen, G. G., Physics I, '03.
McEwen, J. S., English II, '97.
Macfarlane, Annie S., French III, '07; English III, '07.
McGaughey, G. A., History I, '99 ; Political Science I, '00.
McGibbon, A., Latin I, '97.
McGillivray, Alice, Chemistry I, '84.
Macgillivray, Florence, French III, '04; History II, '05.
McGillivray, J. M., Political Science II, '07.
McGregor, Annie K., Latin I, '04.
Macgregor, D. A., English II, 'o5; Political Science I, '05.
McGuire, J., Botany I, '01; Animal Biology I, '01.
McInnes, C. R., Physics I, '95 ; Mathematics I, '96.
MacInnes, W. H. E., Greek I, '02.

McIntosh, J. W., English I, '94; French I, '94; Italian I, 93 ; German I, '93.
McIntosh, W. D., Latin I, '92.
McKay, D. A., Animal Biology II, '00; Botany I, '03.
McKay, J. M... Mathematics III, 'o5.
McKay, M., History I, '79.
McKay, R., Latin I, '81.
McKechnie, J. B., Mathematics I, '03.
McKechnie, J. H., Mathematics I, '02.
McKellar, Kate, Mathematics II, '04.
Mackenzie, Arch. A., Classics I,' '77; Philosophy I, '77; English Literature and History I, '77.
Mackenzie, M., Philosophy I, ' 88.
Mackenzie, Maude E., French III, '05.
Mackenzie, Winewood, French III, '07.
McKinnon, M. A., Philosophy I, '00.
Mackintosh, Helen, German I, '0\%.
McLaren, W. W., English I, '98; Political Science I, '99.
McLean, R. A., Latin I, '04; Greek II, '05.
McLennan, Elizabeth, English II, '99.
McLennan, F. M., Mathematics I, '78.
McLeod, Lola, French III, '04; History III, '04.
McLeod, A., Political Economy I, '82.
McLeod, K. C., Philosophy II, 'o5.
McLeod, P. A., Political Economy I, '87; Philosophy I, '89.
McManus, Emily, English I, '93; Political Science II, '94.
McMillan, G., Experimental Physics I, '07.
McMillan, H. H., Mathematics II, '79.
McNab, G. G., Mathematics I, '02.
McNab, R. C., English II, '96 ; Political Science II, '96.
McNaughton, Elizabeth, Latin I, '99; Greek I, '00; English I, '01.
Macpherson, H., Political Science II, '04.
McPherson, H. G., French II, '96; Italian II, '96; German III, '97; English III, '97.
McPherson, Mary C., French III, '00; German III, '00; English II, '00.
McPherson, N., Philosophy I, '91.
McPherson, W. A., Mathematics II, '91.
McPherson, W. E., English II, '96.
MacQuarrie, W. J., English III, '03; Political Science III, '04.
McRae, A. D., Animal Biology II, '00; Botany II, '00.
McRae, Caroline, English II, '07.
McRae, Donella, French II, '00; German III, '00; Italian II, '00; English III, '00.
McRae, F. A., Political Science II, '96; English II, '97.
McRae, T. W. R., English Literature and History I, '86.
McTavish, D., Classics I, '79; Philosophy I, '81.
McVicar, J., Mineralogy II, '93 ; Animal Biology II, '94; Chemistry II, '96.
Neish, A. C., Chemistry II, '98; Biology II, '93.

Nesbit, D. A., English III, '00; History III, '01.
Neville, K. P. R., Latin I, '97; Greek I, '97.
Newman, G. E., English II, '94; History II, '94.
Newton, Meta, English II, '04; History I, '03.
Nichol, Jennie, Moderns II, '93; History II, '93.
Nichol, W., Chemistry I, '83; Natural Science I, '85; English Literature and History I, '86.
Nicolle, F. R., Animal Biology II, '03; Chemistry II, '03.
Nimmo, H. M., Latin II, '98; Greek I, '98.
Norris, I. T., Mathematics II, '94.
Norris, J., Mathematics I, '93.
Ockley, Beatrice, French III, '07.
O'Connell, Marguerite, French III, '07.
O'Donnell, Florence, History III, '05.
O'Reilly, J. R., Political Economy I, '81.
O'Shea, J., English II, '92.
Parker, F. R., Greek I, '87; Latin I, '87.
Patterson, A. O., Latin I, '96; Greek I, '97.
Patterson, W. J., Mathematics I, '88; Political Economy I, '89; Philosophy I, '95.
Peacock, E. R., English I, '94; Polisical Science I, '94.
Pearce, W. R., Mathematics II, 'o5.
Peck, W. W., English I, '93; History I, '91; Political Science I, '92.
Penman, A. G., Political Science III, '05.
Pergan, P., History I, '92.
Petapiece, A. W., Animal Biology III, '03.
Pettit, L., English III, '03; History I, '04.
Phalen, R. M., Politcial Economy II, '89.
Philp, J. H., Philosophy I, '03.
Pierce, Ada E., English III, '04; History I, '04.
Pitts, F., Philosophy II, '97.
Platt, G. A., English III, 'o5.
Playfair, A. W., Greek I, '95; Latin I, '96.
Polson, S. M., English I, '04; Political Science I, '05.
Polson, Susan C., English I, '95; History I, '96.
Pomeroy, J. C., Physics II, '07.
Poole, Edna, French II, '07; English II, '07.
Pope, F. J., Chemistry I, '90; Zoology I, '91.
Porter, S. E., Animal Biology II, '96.
Pound, F. J., German I, 'o5.
Powell, G. L., English III, '97.
Power, J. F., Botany I, '96; Animal Biology I, '96.
Power, J. J., History II, '00.
Quigley, J. P., Latin I, '03; Greek I; '03.
Race, W. B., French II, '03; English II, '03.
Ramsay, D. C., Philosophy I, '07.
Ramsay, W., Latin I, '02; Greek II, '02.
Raymond, A. L., Animal Biology I, 'o5.
Reid, Etta A., Mathematics I, '92.

Reid, G. M., French III, '99; English III, '98; German III, '99; Italian III, ' 99.
Reid, Jean G., German II, '07; French III, '07.
Reid, M. R., Botany I, '97; Animal Biology I, '97.
Reynolds, B. C., Physiology and Histology III, '07
Reynolds, M., Animal Biology III, '02.
Robb, D., Physiology and Histology III, '07.
Robertson, A. M., Mathematics I, '96; Moderns I, '96.
Robertson, J. B., French II, '03; English III, '03; History III, '03.
Robertson, M. S., Moderns I, '80.
Rogers, C. S. G., Latin I, '00; Greek I, '01.
Rogers, J. E., English I, '95.
Rogers, W. C., Mineralogy I, '98.
Rose, G. W., Philosophy II, '98.
Ross, A. H. D., Mathematics II, '88; Chemistry I, '93; Zoology II, ' 93 ; Histology I, '93.
Ross, A. E., Latin II, '93; Greek I, '93; Sanscrit I, '93.
Row, R. K., Animal Biology II, '97; Botany I, '97.
Russell, W. J., Latin III, 00 ; Greek III, '00.
Ruttan, Emily, Mathematics II, '02.
Ryckman, F. F., English III, '98; History II, '98.
Ryerson, S. E., Mathematics I, ' 95.
Saunders, Elsie E., French I, '04.
Saunders, W. J., Botany I, '99; Biology I, '99.
Schofield, S. J., Mineralogy I, '07; Geology I, '07.
Scott, Carrie, German II, '07; French III, '07.
Scott, C. A., Chemistry I, '85; Natural Science II, '85.
Sexsmith, M. E., History II, '02; Political Science III, '02.
Sexton, J. H., Botany I, '98; Biology I, '98.
Shannon, L. W., Chemistry I, '80.
Sharp, J., Political Economy I, '88: Philosophy II, '88; English I, '92.
Shaver, J. M., Philosophy II, '07.
Shaw, Lily, German II, '03; French III, '03.
Sheppard, F. W., Latin I, '02.
Shibley, G. R., Latin I, '01; Greek I' '01; English II, '02.
Shibley, H. T., Political Economy I, '80; History I, '82.
Shibley, Jennie, English III, '00.
Shibley, L., History I, '90.
Shorey, E. C., Chemistry I, '86; Natural Science I, '86.
Shortell, D. H., English I, '98; History I, '98.
Shortt, A., Philosophy I, '83.
Shortt, J. S., Latin II, '94; Greek I, '94; Political Science I, '97.
Shortt, E. J., Latin I, '96.
Sills, W. R., Mathematics I, '95.
Simpson, B. L., Mathematics I, '04.
Sinclair, E., English III, '97.
Sinclair, J., Political Economy I, '89.
Sinclair, J. A., Philosophy I, '90; Political Science I, '92.
Skelton, O., Latin I, '99; English I, '99; Greek I, '00.

Slack, E. B., Chemiștry I, '04.
Smellie, J. F., History II, '90.
Smirle, Harriette, English I, '02; History I, '03.
Smith, A. L., Greek I, '81; Latin I, '82; English Literature and History I, '83.
Smith, J. C., Latin I, '98; Greek II, '98.
Smith, J. H., Geology I, '92.
Scott, R. A., Animal Biology III, '05.
Smith, F. C., Animal Biology III, '97; Botany I, '97.
Smith, V. B., English II, '95; Italian II, '96; French III, '97; German III, '97.
Smythe, G. H., Latin III, '977; Greek II, '97.
Snell, J., Mathematics I, '90.
Snyder, H. Adell, English I, '94; History I, '97.
Solandt, D. M., Political Science I, '99; Philosophy II, '05.
Speer, J. A., Chemistry I, '05.
Spooner, A. C., Moderns II, '96; English III, '96.
Stanley, J. N., Mathematics I, '01.
Staples, L. E., Geology I, '95.
Stewart, E. J., Greek II, '97.
Stewart, J., Philosophy I, '94.
Stewart, J. A., Mathematics I, '92.
Stewart, J. R., Animal Biology II, '03.
Stewart, W., Mathematics I, '79.
Stillwell, G. B., Experimental Physics I, '07.
Story, Selina G., English I, '00; French I, '01; German I, '01; Italian I, '01.
Stratton, C. M., Chemistry II, '98; Botany II, '99.
Stubbs, J., English II, '99.
Swanson ,W. W., English I, '05; Political Science I, '05.
Tandy, H., French I, ' 00 ; German II, ' 00 ; Italian I, ' 00 ; English III, ' 00 .
Tandy, W. R., English I, '99; Philosophy I, '00.
Taylor, J. A., Botany II, ' 97 ; Animal Biology II, ' 97 .
Teskey, Kathleen, German I, '04; French I, '03; English II, '04.
Thompson, A. M., Latin I, '01; Greek I, '02.
Thompson, B. W., Philosophy I, '07.
Thompson, Edna G., German III, '03; French III, '03.
Thompson, Margaret J., French II, '93; Italian I, '93; German II, '94; English II, '94.
Thompson, P. .M,, Botany I, '98; Biology I, '98.
Thompson, T. J., Philosōphy I, '92; English I, '95.
Tompkins, Louise H., French II, '04; English III, '04.
Truscott, S. A., Mathematics I, '04.
Turnbull, J. H., Philosophy I, '96.
Turner, N. L., Chemistry I, '07; Mineralogy I, '07.
Tyner, W. G., Chemistry II, '98; Biology III, '98.
Uglow, W. L., English I, 'o5.
Vaux, Lilian, English I, '02; Political Science I, '03.
Voaden, J., Botany I, '02 ; Animal Biology I, '02.

Volume, D. A., Political Science I, '97; History II, '98.
Walker, T. L., Chemistry I, '89; Botany II, '89.
Walks, R. H., English III, '00.
Wallace, J., Latin I, '97; Greek I, '98; Philosophy I, '03.
Wallace, W. G., Physiology and Histology III, '07.
Warren, F. R. W., Latin II, '00; Greek I, '01.
Warren, L. A. H., Mathematics I, '02.
Watson, E. C., Latin I, '95; Greek I, '95.
Weese, Metta, German II, '03; French, II, '03.
Wells, E. J., Botany I, '03; Animal Biology I, '03.
Whinton, W. E. ., Biology I, '04.
White, J. W., Chemistry II, '88.
Whitehead, J., Mathematics III, '07.
Whiting, C. C., Philosophy I, '02.
Williams, Mary I., German II, '04; French II, '04: English III, '05.
Williams, W. H., French I, '02 ; German I, '02; Italian I, '02; English II, '03.
Williamson, A. R. B., Chemistry I, '96; Animal Biology I, '96.
Williamson, E. J.; Italian I, '99; French I, '99; German I, '99; English I, '00.
Wilson, A., German I, '07; French II, '07.
Wilson, Annie J., English III, '04.
Wilson, C. L. M., History II, '91; Moderns II, '91.
Wilson, H. L., Greek I, '88; Latin I, '88.
Wilson, R. A., English II, '01; Philosophy I, '02.
Windell, H. C., Latin I, '95; Greek I, '96.
Wood, I., Chemistry I, '91; Zoology I, '91.
Wormwith, N. B., English I, '05; Political Science I, '05.
Wright, J. J., Political Economy I, '87.
Young, J., English Literature and History I, '81.
Young, W., Animal Biology II, '95; Botany I, '95.
Youngson, Mary A., Botany III, '98.

Explanations of the Numbers Attached to the Names in the following List.

PREVIOUS TO 1892.

1. Gold Medallist in Classics.
2. Silver Medallist in Classics.
3. Gold Medallist in Mathematics.
4. Gold Medallist in Philosophy.
5. Gold Medallist in History and English Literature.
6. Gold Medallist in Political Economy.
7. Silver Medallist in Political Economy.
8. Gold Medallist in Chemistry.
9. Silver Medallist in Chemistry.
10. Silver Medallist in Modern Languages.
11. Silver Medallist in Natural Science.

1892 AND AFTERWARDS.

1. University Medallist in Latin.
$\left.\begin{array}{cccl}2 . & " & \text { " } & \text { Greek. } \\ 3 a . & " & \text { " } & \text { German. } \\ 3 b . & " & \text { French. }\end{array}\right\}$ from 1903.
2. Prince of Wales' Prize.
3. Governor General's Prize.
4. Gowan Prize; Botany.
5. Macpherson Prize.
6. Thornburn Prize.
7. Lewis Prize.
8. Latin Composition Prize.
9. Greek Composition Prize.
10. Maclennan Prize.
11. Carmichael Prize.
12. Chancellor's Prize.
13. Gowan Prize; Political Science.
14. Hague Prize.
15. English Verse Prize.

Note.-The University Medal is now the highest award in honours. Candidates must take all the honour papers in the work of the courses selected and no medal is awarded to any cancidate who fails to obtain three-fourths of the whole number-of marks.

## LIST OF GRADUATES.

Graduates are requested to intimate to the Registrar change of residence or any omission in the list.

Names marked with an asterisk are names of clergymen. Date of
Name. Graduation. Address.
Abbott, George A., M.D. . . .. 1895 Watertown, S.D.
Abbott, Rodney H., M.D. . . . .. 1879 Kingston.
Abbott, Samuel A., M.D.. . . .. 1868 (Deceased).
Aberdeen, His Excellency the
Earl of, LL.D............ 1894 London, Eng.
Aberdeen, Her Excellency the
Countess of, LL.D... ... .. 1897 London, Eng.
*Acheson, Stuart, B.A. . . . . . . 1887
Adams, George T. C., M.D. . ... 1892
Adams, Joseph, M.D. . . . . .. 1892
Adamson, Herbert A., M.D..... 1892
Agnew, Andrew, B.A.. .. .. .. 1865
Agnew, John, B.A., 1859; M.A., 1872; M.D
Aikin, J. A., M.A.
1865 (Deceased).
Plevna.
Richmond, Utah, U.S.

Akins, J. R., B.Sc.............. 1907 Kinburn.
Alcombrack, R. W., B.A. . . . .. 189544 Pine St., New York.
Alder, W. R., B.Sc............... . 1907 Prescott.
Alexander, Francis R., M.D. . .. 1881 (Deceased).
Alexander, James A., M.D. .... 1869 Deceased).
Alford, Ethel, B.A... ............. 1907 Brockville.
Allan, Laura E., B.A. . . . . . ... 1899 Toronto.
Allen, Alfred G., M.D. . . . . . . . 1887 Deadwood, S. Dakota.
Allen, James R., M.D. . . . . . . . 1894 Olean, N.Y.
8Allen, John, M.A. . . . ...... 1904 Napanee.
Allen, Maggie D. (Hutcheon), 丞 M.A.

14, 8Allen, Thos. G., B.A., 1888; M. D

Allen Emily B A . . . . . . .. 1889 Chicago.
Allison, D., (President of Univ. of Mt. Allison College), LL.D.

1895 Toronto.
1889 Chicago.
1898 Kingston.

Allison, D. M., M.D.
1903 Sackville, N.B.
Allison, Mary L., B.A.
Alway, Enoch, M.D.
1902 Adolphustown.
Ames, James A., M.D. . .. ... .. 1895 Rush, N.Y.
Ami, Henry M., M.A., D.Sc.... 1892 Ottawa.
Amos, W. W., M.D
1902 Lloydminster, Sask.
Amoss, H. E., B.A.
1905 Aylmer West, Qnt.
Amys, C. H., M.D.
1899 Lakefield,

Date of
Name.
Anderson, F. G., B.A.... . . . ... 1900
Anderson, James J., M.D. . . . . . 1887
Anderson, P. M., M.A. . . . . . . . 1903
Anderson, N. W., M.D. .......... 1888
Anderson, William J., M.D. . . . 1894
Anderson, William J., M.D. . .. 1861
Andrews, D., M.A.... . . . . .. 1904
Andrews, Francis, D.D.. . . . . . 1901
Anglin, Francis R., B.A. . . . . . 1895
Anglin, Harriet, B.A.. .. .. ... 1901
Anglin, James V., B.A., 1883 ;
M.D.. . . . . . . . . . . . . . . 1887

Anglin, Jennie M., B.A... ....... 1907
Anglin, Robert S., M.D. . . . . . . 1882
Anglin, Robert W., M.A. . . . . . . 1897
Anglin, Samuel, B.A. . ... ... 1905
Anglin, Sarah E., (Sparling) B.A.
Anglin, William G., M.D., (Professor Queen's University).
Anning, N. H., B.A., 1905 ; M.A.
Anson - Cartwright, R. H. M., B.Sc.

6, *Anthony, James, M.A.
Archibald G. G. B A. ... 1903
Argyle, His Grace the Duke of, LL.D

Armour, James, B.A.
Armstrong, Albert, M.D.. . . ... 1867
Armstrong, Alfred, M.D. . . . . . 1886
Armstrong, C. C., M.D. . . . . . . . 1898
Arthur, Colin C., M.A... . . . ... 1891
Arthur, Leona, B.A. .............. 1906
Arthur, Nellie, B.A. . . .............. 1906
Arthur, S. W., B.A., 1900 ; M.D.
Ash, A. F., M.D. . .. . . . . . . .
Ashman,. G. H., B.A.............. 1907
Ashton, John J., B.A..... ....... 1886
Asselstine, Bert, M.D.
Asselstine, David P., B.A.. ..... 1892
Asselstine, Elizabeth C., B.A., 1904; M.A. . . . .. .. . . ..
Asselstine, E. B., B.A., 1904 ; M.A.. .. . . . . .. .. .. 1905

Asselstine, Henry Ä., B.A... .. . 1876
Asselstine, Oliver, M.A........... 1906
Asselstine, Robert W., B.A..... 1894
14Attwood, Albert E., M.A. . ... 1896

1903
1901

1907
Cobourg.
Winchester Springs.
Winnipeg, Man.
Lumsden, N.W.T.
Easton's Corners.
Smith's Falls.
Elora.
(Deceased).
Kingston.
Kingston.
St. John, N.B.
Kingston.
Omaha, Neb.
Essex.
Winnipeg.
1883 Kingston.
1906 Oxmead.
1904 Belleville.
Waterdown.
Truro, N.S.
1879 Inverary Castle, Scotland.
Perth.
Arnprior.
(Deceased).
Warkworth.
Cobouro.
Consecon.
Consecon.
Redvers, Sask.
Bradford, Pa.
Ottawa.

Kingston.
Kingston.
Wilton.
Wilton.
Dunnville.
Ottawa.
Date of

Name.
Austin, Griffin H., M.D.*Awde, James, B.A.11aAyers, M. H., M.A.Aykroyd, W. H., M.D.Aylesworth, Archibald K., M.D.Aylesworth, F. A., M.D.Aylesworth, F. L., B.A.Aylesworth, Mabel E., B.AGraduation.18931879
1903
1903 Railton.
1863
1903 Bath.
19021904
Bailey, R. W., M.D ..... 1904
Bailey, W. L., M.A ..... 1904
Bailie, A. A., B.Sc. ..... 1906
Bailie, Thomas H., M.D. ..... 1892
Bain, Angus U., B.A.. ..... 1888
12Bain, Hugh U., B.A., M.D ..... 1871
Bain, Hon. Mr. Justice J. F., B.A ..... 1867
*Bain, William, B.A., 1845 ; M.A.,1847 ; D.D.1872 (Deceased.)
Bain, William G., B.A. ..... 1886
Bain, William R.,B.A. ..... 1863
3aBaird, A. W., M.A. ..... 1906
Bajus, Carrie, B.A. ..... 1901
Baker, A. E., M.D ..... 1906
Baker, C. W., B.Sc ..... 1905
Baker, Hat. M.,(Thompson) M.A. ..... 1892
Baker, H. S., B.Sc.Baker, Herbert W., B.A1902
1891Baker, J. C., B.Sc
1903
Baker, J. Y., B.A., 1896 ; M.D. . ..... 1899
20Baker, M. B., (Lecturer inGeology, School of Mining)B.A., 1900 ; B.Sc.1902 Kingston.
Baker, Thomas C., M.D 1888 Smith's Falls.
Baker, William C., (Lecturer inPhysics, School of Mining)M.A1895
Baker, James G., B.A1897
Balfe, T. H., M.D ..... 1882
Ballagh, James H., B.A. ..... 1878
Ballantyne, W. H., M.D ..... 1906
Bamforth, Richard, B.A. ..... 1897
Bannister, Percy G., M.D ..... 1897
Bannister, J. A., B.A. ..... 1898
Barber, abbert E., M.D ..... 1892
Barber, Vincent, M.D ..... 1897
Barclay, William B. C., B.A ..... 1888
Barker, Alexander N., M.D. ..... 1893
Barker, John, B.A

Kingston.
Stimmerstown.
Hamilton.
Kingston.
Rednersville.
Kingston.
South Bend, Ind.
Brooklyn, N.Y.
Arnprior.
(Deceased.)
Leduc, Alta,
Date of
Name. Graduation.
Address.
Barnard, A. T., B.A., 1899 ; M.A. 1907 Hamilton.
Barnes, J. A., M.D. ..... 1906
Barnet, T. J., M.D ..... 1900
Barr, Janet, B.A ..... 1900
North Bay H. S.
Barrett, H. M., B.A ..... 1903
Bartlett, James, B.Sc. ..... 1907
Bateman, Francis J., B.A ..... 1888
Bateman, G. C., B.Sc. ..... 1905
*6Bates, C. J. L., M.A ..... 1901
*Battisby, Jas., D.D. ..... 1905
*Baxter, John C., D.D ..... 1878
*Bayne, James, D.D ..... 1865
(Deceased.)
10Beall, Arthur W., B.A., 1888; M.A.1892
5 Beaton, Alexander H., B.A. ..... 1894
Beaton, Kate F., B.A. (Nimmo). ..... 1897
Betu, Jat A, B.A. (Nimmo)
Betu, Jat A, B.A. (Nimmo) Beattie, John A., B.A. ..... 1891
Beattie, William, M.D ..... 1866
Beatty, Elizabeth R., M.D. ..... 1884
Beachard, David, M.D ..... 1887
Beckett, James, M.D. ..... 1863
25Beckett, S. E. J., B.A., 1903 ; M.A
*Beckstedt, I. N., B.A ..... 18991305
Beeman, Truman A., M.D ..... 1887
Beeman, Thomas W., M.D.
Beeman, William C., M.D ..... 1886
Begg, Colin L., B.A. ..... 1895
Begg, John W., M.D. ..... 1888
Begg, William P., M.A., D.D ..... 1896
Belch, John A., M.D. ..... 1889
Belfour, P. F., B.A. ..... 1899
Bell, Alexander, M.D ..... 1865
Bell, Andrew, B.A. ..... 1853
Bell, A. M., M.D ..... 1906
Bell, F. C., B.A ..... 1905
Bell, F. M., M.D ..... 1903
*Bell, George, B.A., 1845 ; LL.D1872
Bell, George, B.A. ..... 1878
Bell, James M., M.D ..... 1857
9Bell, J. M., M.A., DirectorGeol. Survey of New Zea-land)
Bell, John, B.A., 1862; M.A.,1865 ; M.D.1866 (Deceased.)
*Bell, John, B.A. ..... 1890
Bell, John H., M.D ..... 1890
Bell, Josiah, B.A., 1864; M.A. ..... 1877
Kingston, Ja.(Deceased.)Windsor.Crow's Nest Coal Co.
Christiana.
Guanajuato, Mexico.Tokio, Japan.
Chatham.
(Deceased.)
Peterboro.
Toronto.
Detroit, Mich.
Miami, Man.
Wiarton.
Lansdowne.
Tecumseh.
(Deceased.)
Carberry, Man.
Toledo, Ont.
Mallorytown.
Perth.
Ottawa.
New York, N.Y.
Cartego, Costa Rica.
Messina Springs.
Syracuse, N.Y.
Marlbank.
Lakefield.
Almonte.
Moscow.
Winnipeg, Man.
Ottawa.
(Deceased.)
Toronto.
(Deceased.)
1899 Wellington, N.Z.
Kingston.
Toronto.

Date of
Name.
Bell, Robt., LL.D., Assist. Direc. Geological Survey of Can.).
*Bell, William, B.A.
Bellamy, A. W., M.D
1855 (Deceased.)
Bell y, Mabel, B.A. . . . ...... 1801
Bellamy, Mabel, B.A.. .. .. ... 1901
*Bellis, George, D.D.
Belton, W. J., M.D.
Bennett, A. E. H., M.D
*Bennett, Orr, B.A
Bennett, Charles V., B.A. . . . . . 189
Bennett, H J, M.D.
1905
Bennett, Henry, M.D.
1878
*Bennett, J. W. C., B.A
Bennett, W. L., B.A
1897
Bennett, W. H., B.A
Benson, J. R., B.A., 1853 ; M.D
*Bergne, Samuel B., D.D.
Berlanquet, Hugh S., B.A.
Bermingham, Mary E., (Macarow) M.D.
Bermingham, $\dot{F} . \ddot{H} ., \ddot{M} . \dot{D}$
1882
Bernard, Gerald, M.D
Berney, K. C., B.Sc.
Berney, Laura E., B.A.
Bernstein, J. S., M.A.
Berry, George H., M.D.
Bertram, Thomas A., M.D
Best, Isabel M., B.A. (Watt).
Bethune, Alexander, M.D
Bethune, Harry F., M.D
Bethune, William, B.A
Betts, Alfred H., M.D
Betts, John H., M.D.
Beveridge, Alice B., (Porteous) B.A.

1892
Beveridge, R. W., B.A... .. ... 1905
Bice, Mark, M.D
1869
Biggar, George W., M.D
1862
Bigham, Hugh, M.D
1864
Bigham, John, M.D.
Billings, T. H., M.A.
1865

Bilton, William J., M.D
1902

Bingham, James, M.D.
1892
*Binnie, James, В.A., 1889 ; M...., 1890 ; B.D1868

1892 Tweed.

Date of
Name.
Birch, BeatriceD., B.A.
Bird, Francis W., M.D
Bird, Nelson J., M.D
Birkett, F. W., M.D
Bishop, C. P., B.A. . . .. ..
Bissonnette,
Julian 1880 ; M.D
*Black A rmstrong, D D. 1900
Black, Benjamin F., M.D
Black, B. S., B.A. . . . . . . . . . . . 1904
Black, Jean B., B.A. . . . . . . . . 1904
Black, H. H., B.A., 1898; M.A. . 1899
*Black, John, D.D.. . . . . . ... 1876
Black, John A., B.A. . . . . . . ... 1891
3bBlack, Norman F., M.A........ 1905
Black, William A., M.D. . ... .. 1862
Blakeley, Robert, M.D.
Bland, C H, B A ......... 1907
*Bland, Salem (Professor of Wesley College), D.D.. ... 1903
Blaylock, Ella, M.D. (Atherton). 1887
Bleasdell, Charles E., M.D. . ... 1868
Bleecker, G. H., M.D. . . . . . ... 1902
Bloor, W. R., M.A. . . . . . . . . . 1902
2, 19Boak, A. E., M.A......... 1907
Boddy, Martha, B.A.. ... . . .. 1894
Bogart, I. G., M.D. . . . . . . . . . 1901
Bogart, J. L. H., B.Sc. . . . . . . . 1903
Boland, W. A., M.A. . . . . . . . . 1905
Bolton, E., M.D.
20, 28Bolton, L. L., M.A., 1903; B.Sc.

1906
1906
Bongard, Edna E., B.A. ......... 1306
Bonner, John, B.A., 1845 ; M.A.. 1847
Booth, Donald B., M.D.. .. .... 1868
Borden, Robert L., K.C., M.P., LL.D
Bothwell, A. M., M.A.. .. .. .. 1905
*Borley, H. D., B.A. . . . . . . . . 1903
Boucher, Joseph A., M.D. . . . . . 1894
Bouchier, H. P., B.A.. .. . . ... 1853
Bourinot, John G., LL.D. . . . . . 1887
Bourns, Thomas C., M.D. . . . . . 1892
Bourns, William H., M.D. ..... 1892
Bovey, Henry T., M.A., LL.D., (Dean of the Faculty of Applied Science, McGill University)

1903

Address.
Kingston.
(Deceased.)
San Francisco, Cal.
Ottawa.
Athens H. S.
Stirling.
Holton, Mich.
Kingston.
Hamilton.
Toronto.
(Deceased.)
Massie.
Regina, Sask.
(Deceased.)
(Deceased.)
Pembroke.
Winnipeg, Man.
Nashua, New Hamp.
(Deceased.)
Trenton.
Pullman, Wash.
Kingston.
Manitoba.
Kingston.
Militia Dept, Halifax.
Yorkton, Sask.
Philipsville.
Eganville.
Picton.
(Deceased.)
(Deceased.)
Ottawa.
Queen's College, Oxford, England.

Watertown, Mass.
(Deceased.)
(Deceased.)
Whitney.
Adison.

1893 Montreal.

## Date of

Name.
Bowen, George H., M.D. . . . . . 1887
Bowen, H. M., M.D.............. . . 1907
9, 28Bowen, N. L., M.A.
Bowen, Robert, M.D.. . . .. ... 1865
Bowerman, John T., M.A. . . . . . 1891
Bowers, Samuel S., M.D. . .. . . 1857
Bowie, H. A., M.D. . . . . . . . . . 1901
Boyce, H. A., M.D....... . . . ... 1907
Boyd, Agnes M., B.A. . . . . . .. 1904,
Boyd, Annie A., B.A., 1897 ; M.A. 1898
Boyd, Edward, LL.B. . . . .. .. 1863
*Boyd, John D., B.A. . . . ... . . 1889
Boyd, M. E., B.A.. .. .. .. .... 1898
Boyle, Arthur A., M.D.. . . .... 1859
Boyle, Joseph, B.A., 1891; M.D.. 1896
*Boyle, W. H. W., B.A. . . . . . 1884
Bradley, Gordon F., B.A.. . . .. 1890
Brady, James, M.D.. . . . . . . .. 1891
Brander, J. F., M.D. . . . . . . . . . 1906
Brandon, J. S., B.A. . . . . . . . . 1899
Brandon, W. M., B.A.
1899
Branigan, P. K., M.D. . . . . . . . 1862
Branion, S. J. A., B.A.... . ..... . 1907
Branscombe, M. E., B.A., 1903 ; M.D.

1904
Bray, John L., M.D., 1863 ; LL.D. 1905
Breuls, I. D., B.A. . . . . . . . .. 1900
Brick, N. W., B.A. . . . . . . . . . 1903
12Briden, William, B.A. . . . ... 1880
Bridge, B. B., M.D. . .. . . . . .. 1900
Bridgeland, Samuel, M.D. . .. . . 1870
Brien, James, M.D. . . . . . . . . 1872
*Bright, A., B.A.... . ... ..... 1905
25 Brisco, N. A., B.A., 1898 ; M.A. 1900
Britton, A. H., B.A.
1903
Britton, Edward H., B.A.. ..... 1884
Britton, Mildred G., (Brock) B.A 1899
28Brock, Reginald W., (Acting Professor, School of Mining), M.A.
Brokenshire, W. H., B.A.. . . .. 1902
*Brough, Thomas A., B.A . . .. 1893
Brown, Albert H., B.A. . . . . . . . 1896
Brown, Amelia, B.A. . . ... ... 1898
Brown, Frederick M., B.A. . .... 1800
Brown, G. A., B.A., 1904; M.A., 1907; B.D.

1907
Brown, George E. J., LL.B. . .. 1894
Brown, John E., M.D.............. . . 1907

Address.
Gananoque.
Gananoque.
Kingston.
H. M. Service.
(Deceased.)
(Deceased.)
Essex Centre.
Murray.
Kingston.
Essex.
Kingston.
Ottawa.
(Deceased.)
Casselman.
Lake Forest.
Manitou, Man.
Rochester, N.Y.
Calgary, Alta.
Trail, B.C.
Toronto.
(Deceased.)
Wolseley, Sask.
Picton.
Chatham.
Toronto.
Kingston.
Ingersoll.
Albert City, Iowa.
(Deceased.)
Essex Centre.
Ingersoll.
Columbia Univ., N.Y.
Toronto.
Kingston.
Kingston.

Kingston.
Buffalo, N.Y.
Vancouver, B.C.
Ottawa.
Kingston.
Saskatoon, Sask.
Oak Grove.
Creemore.
Kingston, Jamaica.

## Date of

Name.
Brown, Jonathan, M.D
*Brown, James A., B.A.. .. .... 1883
5, 22 Brown, J. C., B.A., 1894 ; M.A 1896
Brown, J. G. Williston, B.A.... 1890
Brown, J. W., B.A. . . . . . . . . . 1901
Brown, Marshall J., M.D. . . . . . 1856
Brown, P. W., B.A. . . . . . . . . . . . . 1905
Brown, Sara A., M.D. . . . . . . . . 1890
Brown, T., B.Sc. . . . . . . . .. .. 1904
*6Brown, T. C., B.A., 1903 ; M.A. 1904
Brown, W. C., M.D.. . . . . . . .. 1904
Brown, William G., B.A. . . . ... 1881
Browr, W. T., B.A. . . . . . . . .. 1901
Bruce, Frederick, M.D. . .. . . .. 1886
*Bryan, Andrew C., B.D. . .. .. 1895
Bryan, George J., B.A.. . . .. .. 1888
Bryan, Hugh W., B.A., 1893;
M.A.

1894
Bryant, J. F., B.A. . .. . . . . . . . . 1901
Bryce, Walter, B.A. . . . . . . . .. 1896
1Brydon, R., B.A. . .. ... .. .. 1903
Brymnner, Douglas, LL.D. . . . .. 1892
Bryson, Isabel S., B.A... . . ... 1905
Bryson, Mary G., B.A. . . . . . .. 1899
Buchanan, H. M., M.D. . . . .... 1889
*Buchanan, John H., B.A.(Medical Missionary)
Buchanan, Mabel A., B.A. . . . .. 1904
Buckley, Patrick D., LL.B. . .... 1863
Bullis, William H., M.D. . . . . . 1884
Burchill, A. M., .. .. .... ...... 1907
Burdett, Harry E.. M.D. . . . ... 1886
Burger, C. H., M.D. . . . . . .... 1898
Burgess, H. H., B.A. . . . . . .... 1899
Burgess, Jas. E., B.A., 1868; M.A. 1876
Burke, Martin L., M.D.... ..... 1907
Burns, Clement B., B.A... ...... 1890
*Burns, James C., D.D.. . . . . . ... 1884
Burns, Olive M., B.A. ........... 1906
*Burns, Samuel S., B.A. . .. ... 1894
15Burns, William, B.A. . .. .. .. 1886
Burr, Lenne G., B.A. . . . . . . .... 1903
20, 28Burrows, A. G., M.A., 1900 ; B.Sc.

1902
Burrows, John G., M.D. . . . . . 1891
*4, 6Burton, Robert, M.A.. . . .. 1898
Burton, S., M.D. . . . . . . . . . .. 1900

New Lothrop, Mich.
Agincourt.
Williamstown.
Hanover.
Kingston.
Collingwood.
Hawkesbury.
Toronto.
Bellview.
Toronto.
Mount Morris, Mich.
Nanton, Alta.
Calgary, Alta.
Brockville.
Prince Albert, Sask.
Toronto.
Oustic.
(Deceased.)
Ottawa.
Ottawa.
St. Lawrence, N.Y.
Amkhut, India.
Lanark.
(Deceased.)
Rochester, N.Y.
Bolton.
St. Paul, Minn.
Kingston, Jamaica.
Owen Sound.
London.
Port Antonio, Jamaica.
Dawson City, Y.T.
(Deceased.)
Kingston.
Lakefield.
Vancouver, B.C.
Ameliasburg.
Provincial Assayer, Belleville.
Marlbank.
(Deceased.)
Redfield, Oswego
Co., N.Y.

Name.
Butler, Tobias J., M.D.
Byers, Robert P., B.A.
*Byrnes, J. D., B.A., 1898 ; B.D. .
Byrnes, Marie, B.A.
*Caie, George J., B.A
Cairns, D. D., B.Sc., 1905 ; M.E...
Caldwell, Daisy, B.A.
*Caldwell, J. A., B.A.
*Caldwell, J. S., B.A.
Caldwell, Maxwell, B.A
Caldwell, William C., B.A.
2Calhoun, A., M.A.
Callfas, W. F., M.D
Calvin, D. D., B.A.
Calvin, J. D., B.A., 1904 ; B.Sc.. .
Calvin, Marion, B.A.
Camelon, Thomas P., M.D.....
Cameron, Alexander D., M.D.
*Cameron, A. E., B.A.
Cameron, A. G., B.A.
Cameron, A. R., B.A.
Cameron, C. Alice, B.A.
*Cameron, Charles I., B.A., 1861 ; M.A

1*Cameron, Charles J., B.A., 1886 ; M.A

Cameron, Dan, M.D.
Cameron, D. R., M.A
*Cameron, Hugh, B.A.
Cameron, James C., B.A., 1888; LL.B
Cameron, John, B.A......... 1864
*Cameron, James Y., M.A
Cameron, Wm. A., B.A., 1887;
M.D. . . . . . . . . . . . . 1890
Cameron, Jessie, B.A.
Campbell, Agnes L., B.A.
Campbell, Albert L., M.D.

## *Capll 1 Al 1889

Campbell, Alexander, B.A.. .. 1862
*Campbell, Alexander J., D.D. .. 1887
10Campbell, Archibald L., M.A..
Campbell, Annie G., (Macgillivray) B.A.
Campbell, A. S., $\dot{\text { B. }} . \ddot{\text { Sc }}$.
*Campbell, Colin D., B.A... .. .. 1896
Campbell, Daniel, B.A

Date of

1896
1865

1897
1898
Graduation. Address. 1895 (Deceased.)
1893 Prospect Ave., Buffalo, N.Y.
1901 Cobalt.
1903 Cumberland.
1861 Forfar, Scotland.
1906 Geol. Survey, Ottawa.
1901 Sydenham.
1902 Pilot Mound, Man.
1904 Watson's Corners.
1904 Ottawa.
1866 (Deceased.)
1902 Fort William.
1898 St. Louis, Mo.
1902 Kingston.
1907 Kingston.
1901 Kingston.
1890 Detroit, Mich.
1882 Spaulding, Nebraska.
Ymir, B.C.
Balliol College, Oxford, England.
Prescott.
Philadelphia.
(Deçeased.)
Philadelphia, Pa.
(Deceased.)
Lancaster.
Morrisburg.
Cornwall.
(Deceased.)

Almonte.

Stonewall, Man.
Geelong, Aus.
Fergus.
1891 Kingston.
1907 Lashburn, Sask.
1896 I oronto.
1904 Ottawa.

Date of
Name.
Campbell, Donald, B.A.
Campbell, George, M.D.
*Campbell, George D., B.A.. ... 1895
Campbell, J. A., B.A.
Campbell, James W., M.D., Professor, Queen's University..
*Campbell, John, B.A., 1847 ; M.A
*Campbell, John, Prof., Presbyterian College, Montreal, D.D.
*C.ampbell, J. Fraser, D.D. . ....
Campbell, John H., M.D
Campbell, Joseph, M.D.
Campbell, Joseph S., M.D. . ....
Campbell, Lizzie V., B.A. . . . . .
*Campbell, Neil, B.A.
Campbell, Peter McG., B.A., 1892 ; M.D.
*Campbell, Robert, B.A., 1856 ; M.A., 1858 ; D.D. . ... .. ..
*Campbell, Robert, B.A., 1867 ; M.A., 1870 ; D.Sc.

Carey, N., M.D
Carefoot, G A B A . . . . . 1904
Carmichael, Andrew, M.D.
Carmichael, D. A., B.A.. . . ... 1907
*6Carmichael, Harvey, M.A. . .. 1897
*Carmichael, James, D.D.. . . . 1892
Carmichael, James F., B.A.. ... 1887
2Carmichael, Norman R., (Prof., Queen's University) M.A...
Carmichael, R. F., B.A., 1900 ; M.D

Carr-Harris, A., B.Sc.
1890
1891 Kingston.
1850 (Deceased.)
1903 (Deceased.)
1897 Rutlam, Cen. India.
1856 (Deceased.)
1867 Ontario, N.Y.
1890 Ontario, N.Y.
1899 Smith's Falls.
1883 Oro Station.
1896 Cardston, N.W.T.
1887 Montreal.
1884 Perth.
1903 Bakersville, Vt.
Newmarket.
Sundridge.
Unionville.
Richmond, Que.
Strange.

Kingston.
(Deceased.)
Bisbee, Ariz.
42nd St. and Lexington Ave., N.Y. City.
Carruthers, J. S., M.D.
Cartwright, Alexander D., B.A.
Cartwright, Richard C., M.D....
Carscallen, Allen B., M.D.
Carscallen, W. E., M.D.
Cartwright, C. T., B.Sc.
Caskey, J. C., M.D.
Carswell, Jennie, B.A.
Case, George H., M.D
Casselman, Joseph, M.D
1900
Carr-Harris, F. F., M.D.. . . .. 1901

Casselman, Simon B., M.D.
Cathro, Eizabeth D., B.A
*Cattanach, James, B.A.

1904
1885 Ottawa.
1884 Ottawa.
1875 Enterprise.
1897 Tamworth.
1905 Trail, B.C.
1904 Ottawa.
1896 Renfrew.
1876 (Deceased.)
1886 Stockden, Cal.
1907 North W:1lia.
1907 North Williamsburg.
1905 Regina, Sask.
1889 Manch Chunk, Pa.

Date of
Name.
Cattanach, Jessie S., B.A. Graduation. Address

* Cattanach, John C., B.A., 1868; M.A.
* Caven, William, D.D., (Principal Knox College)
Cavers, T. W., B.Sc.
Chaffey, Ellsworth, M.D
Chame, T F M.D. . . 181
Chamberlain, Watson P. M.D. 1888
Chambers, Alice, B.A.. . . . . ... 1888
Chambers, Daniel, M.D.
1855
6 Chambers, L. P., M.A
Chambers, Mary M.,(Lavell)B.
*Chambers, Robt., B.A., 1866 ; D.D
Chambers, R., jr., M.A. . . . . .
Chambers, William, B.A.
Channonhouse, John, M.D.
Channonhouse, R. C., M.D.
Channonhouse, Thomas, M.D... 1860
Chant, Joseph, M.D.
Chapman, A. B., M.D. . . . . . 1899
Chapman, Edward J., LL.D.. . .. 1867
Chapman, W. F., B.A. . . . . . . 1907
*Childerhose, Stephen, B.A... ... 1884
Chisholm, James, B.A., LL.D.... 1892
*Chisholm, John, B.A.
Chisholm, Harvey F., M.D.
11Chisholm, William I., M.A.
Chown, Albert P., M.D. .
Chown, Henry H., M.D., (Dean of Medical Faculty, University of Manitoba) 1880 ; LL.D.

1903
Chown, George Y., B.A., (Registrar, Queen's University)
Chown, Stanley T., B.A.
Chrysler, Francis H., B.A.
1884

Clancey, Charles C., M.D
1866
$3 b$ Clark, Grace, M.A.
Clark, John K., B.A.
Clark, Richard J., M.A.

* Clark, Wm., (Professor, Trinity Univ.), M.A., D.C.L., D.D. .
Clark, W. C. D., M.D. . . . . . . . 1885 Toronto.

Date of
Name.
Clark, William T., B.A. Graduation. Address. Clark, W W B, B.A...... 1895 Vancouver, B.C. Clarke, G. W., B.A., 1898; M.A. Clarke, H. J., B:A.
Clarke, James, M.D 1899 Grand Forks, B.C. 1905 Belleville.

Clarke, John, M.D.
1868 Bay City, Mich.
Clarke, Joseph A., M.A
1872 (Deceased.)
Clarke, John G., M.D
1882 (Deceased.)
. . . . . . 1880 Meaford.
Clarke, J. T. A., B.A..
1899 Lander, Man.
Clark, L. J., B.A. . . . . . . . . . . 1898 Harbord St. C. I., Toronto.
Clarke, T. E., B.A. . .. ... .... 1906 Ottawa.
Clarke, William, M.D.. . . . . . . 1879 Ireland.
*Clarke, William C., B.A. . .. .. 1855 (Deceased.)
Clark, Hon. Wm. Mortimer, (Lieutenant-Governor of Ontario) LL.D.
Claxton, George, B.A.. .. ..... 1876 Gladstone, Man.
*Claxton, John A., B.A., 1888; B.D.

1896 Cochrane, Alta.
Claxton, Williain, M.D. . . . . . . . 1874 (Deceased.)
Cleary, J. R. S., B.A........... . . 1900
Cleaver, J. C. C., M.A. .......... . 1879
Cleaver, William F., M.D. ...... 1879
Clerihew, Ernest M., M.D. ..... 1890
Cliff, G. F., M.D. . . . . . ... ... 190G
Clifford, Margaret, M.A
1907
Clinton, George, M.D.
Cloney, S. Louise, M.A.
1878
Clothier, J. O., B.A.
1897
Cloutier, Felix, M.D 1900

Clugston, J. F., B.A.
Cluness, Wm. R., B.A., '55; M.D.
1889

Clyde, William, B.A., 1885 ; M.A.
1907

Coad, Edith, B.A.
Cochrane, H., M.D.
1859
1887
Con 1906
Cochrane, James B., B.A.
Cochrane, Rt. Hon., 12th Earl of Dundonald, LL.D.

1904
Cockburn, G. L., M.D.. . . . . . . . 1906
Code, E. S. L., B.Sc.
1907
Code, J. H., M.D.
1905
Code, L. B., B.Sc. ................ 1906
Cody, Rev.H. J., (Professor, Wycliffe College) D.D.

1903
Cogan, Jeremiah R., M.D
1861
Coleman, William F., M.D 1863
Collier, W. H., B.A. .. . . . . . . 1898
Collins, Cornelius, M.D. . .. ... 1886
Collins, E. A., B.Sc. . . . . . .... 1905

Montserrat, Trinidad.
New York.
Carleton Place.
Conroy.
Belleville.
St. Catharines.
Hawkesbury H. S.
Crysler.
Epping.
San Francisco, Cal.
Petrolea.
Brockville.
Mayfield, Sask.
Kingston.

Sturgeon Falls.
Kingston.
Havelock.
Wilkinsburg, Pa.
Toronto.
(Deceased.)
163 State St., Chicago
Peterborough.
(Deceased.)
Copper Cliff.

Name. $\begin{gathered}\text { Dat.e of } \\ \text { Graduation. Address. }\end{gathered}$
9Collinson, J. C., M.A. . . . . . . . 1898
Collison, G. W., M.D. . . . . . .. 1898
Comer, Alexander T., M.D. . ... 1864
Conboy, Daniel, B.A.. . . . . .... 1888
Condell, Wni. N., M.D. . . . . . . . 1898

* 7 Conn, James R., M.A. . . . . . . . 1896

Connell, F. M., B.Sc. ............. 1906
3Connell, James C., B.A., 1884 ; M.A., 1885 ; M.D., (Dean of Medical Faculty, Queen's University)............ 1888
Connell, Jessie C., (Binnie) B.A. 1892
Connell, J. V., M.D
Connell, W. T., M.D., (Professor Queen's University). . .. .. 1894
Conner, F. E., M.D. . . . . . . . . 1899
Connerty, J. Moore, M.D. . .. . . 1886
Connolly, A. K., M.D.. . . . . . . . 1904
Connolly, E. W., M.D. . . . . . . . 1900
10Connolly, Henry A., M.A. . . . 1885
Connor, Grace L., M.A. . .. ... 1905
Consitt, E. C., M.D. . . . . . . . . . . . . 1905
Cook, Gertrude A., B.A. . . . . . . . 1903
*Cook, John, LL.D.. .. . . ..... 1880
Cooke, John A., B.A., 1884 ; M.A. 1905
Cooke, William H., M.D. . . . . . 1888
Coon, Darius A., M.D. . . . . . .. 1890
8Coon, Harry J., M.A. ............ 1906
Cooper, A. B., B.A. . . . . . ..... 1906
Cooper, E. G., M.D. . . . . . . . . . 1899
Copeland, George T., B.A. . . . . 1889
Corbett, George H., M.D. . . . . . 1856
Corbett, Henry T., M.D. . . . . . 1868
Corkill, Edward J., B.A. . . . ... 1886
स्राE Corkill, E. T., B. Sc., 1904;

## स्य 4

 M.E.Corliss Maret ${ }^{\circ}$...... 1805
Coriss, Margaret A., M.D.. .. . 1885
*Cormack, James, B.A.. . . .. .. 1872
Cormack, John H., M.D. . . . ... 1893
Cornell, Albert P., M.D. . . . . . . . 1882
10Cornell, N. L., M.A... . . . . . . 1907
Cornell, Stanley S.. M.D. . .. . . 1886
Cornett, A. D., B.A.... . . ...... 1907
Cornett, W. F., B.A... .. ...... . 1907
*Cornett, William H., B.A.. ... 1887
Corrigan, D. J., M.D. . . . . . . . . . 1898
Corry, Robert, M.D. . . . . . . . . 1861
*Cosgrove, Thomas A., B.A.. .. 1887

Kingston.
Brinston's Corners.
New York.
Brockville.
Napanee.
Cobalt.

Kingston.
Tweed.
Indian Head, Sask.
Kingston.
Macdonald, Man.
Smith's Falls.
Vancouver, B.C.
Cranbrooke, B.C.
Kingston.
Kingston.
Perth.
Dunnville.
(Deceased.)
Morrisburg.
Minneapolis, Minn.
Elgin.
New York, N.Y.
St. Catharines.
(Deceased.)
Cornwall.
(Deceased.)
(Deceased.)
Bureau of Mines, Toronto.
Australia.
Ottawa.
St. Thomas.
(Deceased.)
Carleton Place.
Brockville.
Kingston.
Kingston.
Los Angeles, Cal. West Webster, N. Y. (Deceased.)

Date of
Name.
Costello, T. J., M.D. Graduation. Address.
Couch, S., B.A1904
Coughlin, Richard, M.D. ..... 18811905 Melita, Man.Countryman, John E., M.D.
*Coussirat, Daniel, B.D., D.D.,(Prof., McGill University)..
Coutlee, Hillier Noel, M.D.
1893 (Deceased).
1882 Sharbot Lake.
Cowan, H., B.D. 1905 Chatham.
Cowan, S. G., B.A ..... 1901
Cowles, J. P., B.A
1907 Hamilton.14Cowley, R. H., B.A., 1889; M.A
Cox, John, (Professor, McGillUniversity) LL.D
1893 Ottawa.
1903 Montreal.
Coy, William F., M.D ..... 1886
Vancouver.
Craft, Robert A., M.D ..... 1895
Craig, Hugh A., M.D ..... 1878
Craig, H. B. R., B.Sc. ..... 1903
Superior Jct. Branch
Craig, H. G., M.D ..... 1906
Craig, James J., B.A. ..... 1874
Craig, J. D., B.A., 1897; B.Sc.
*Craig, Robt. J., B.A., 1871 ; M.A.
Craig, William, B.A. ..... 1858Craine, Agnes D., M.D. . . . .... 1888
*Cram, W. H., B.A., 1895 ; B.D. .Cram, W. S., B.A.
Cranston, James G., M.D 1860 Arnprior.
Cranston, James J., M.D 1895 Arnprior.
Crawford, C. M., B.A. 1907 Kingston.
Crawford, Joseph, M.D. ..... 1857 (Deceased.)
12Crawford, Robert, B.A. 1869 Kingston.
*Crawford, W. F., B.A., 1900; B.D Chesterville.
Creeggan, Jno. G., B.A., 1878;M.D.
Creighton, J. E. (Sage Professor,Cornell University), LLD.
Crews, J. W., M.D
Croft, L. V., B.A.. ..... 1902
Croskery, Robert A., B.A ..... 1896
Croskery, E. A., M.D ..... 1897
Crozier, J. A., B.A. ..... 1897
*Crummy, Eber, D.D ..... 1905
Cryan, Georgina (Fraser), B.A. ..... 1898
Cryan, John, M.D. ..... 1883
Cryan, J. H., M.D ..... 190319001874
1900 Cobden.
1906 Regina, Sask.1903
Bellingham, Wash.
(Deceased.)of the G.T.P. Ry.
Aylmer East.
Mount Forest.
Ottawa.
Kingston.
(Deceased.)
Smith's Falls.
1886 Delta.
Ithaca, N.Y.
Pittsford, N.Y.
Middleville.
Napanee.
Trelona, Wyo.
Toronto.
(Deceased).
Demorestville.

## Name.

Graduation. Address.Date of
*Cumberland, Jas., B.A., 1877;
M.A.
1880
1880
Stelia.

Stella.
Cumberland, Thomas, M.D.. ... 1884

(Deceased.)12Cumberland, Judge thos. D.,B.A.Cumming, $\ddot{\mathrm{A}} . \ddot{\mathrm{L}} ., \ddot{\mathrm{B}} . \ddot{\mathrm{Sc} . . .} . . . . . .$.
Cumming, Lucy, B.A ..... 1903

Vancouver, B.C.
Cummings, J. G., B.A. ..... 1898
Cunningham, Arthur B., B.A. . 1891 Kingston.

Kingston.
Cunningham, Dav., B.A., 1887; M.D

(Deceased.)Cunningham, Henry C., M.D...
Curle, William, B.A., 1889; M.A. ..... 1890

Ottawa.
Curphey, A. G., M.D
*Curran, Wm. B., B.A., 1859; M.A 1870 Colwich Rectory, Nottingham, Eng.

Colwich Rectory,
Nottingham, Eng.
*Currie, Arch., B.A., 1858 ; M.A. ..... 1861

Sonya.*Currie, John, D.D., (Professor,Theological Hall)
1885
Halifax.
Currie, P. W., B.Sc 1901 Dept. of Interior, Ot-

Dept. of Interior, Ot-
Curry, James W., B.A. ..... $18 \% 8$

Toronto.
Curtin, C. J., B.A., 1905 ; B.Sc.$190 \%$
Curtin, T. V., M.D ..... 1901
3aDadson, Helena, B.A.. ..... 1905
Dalton, G. F., B.A., 1898 ; M.D.. ..... 1902
*Daly, Charles H., B.A. ..... 1890
Daly, Wilberforce, B.A. ..... 1880
Dame, Alexander A., M.D ..... 1886
Dandeno, J. B., B.A ..... 1895
*D'Argent, William E., B.A. ..... 1884
Dark, T. A., M.A ..... 1904
Darragh, Robert J., M.D ..... 1886
David, Alfred, M.D. ..... 1873
David, William C., M.D ..... 1889
Davies, Ransom A., M.D. ..... 1876
Davis, Bidwell N., B.A. ..... 1881
Davis, John J., M.D. ..... 1894
Davis, Lewis T., M.D ..... 1883
Davis, Robert H., M.D ..... 1858
Davis, Sydney N., M.D ..... 1891
Davis, William H., M.A ..... 1893
Davis, J. S., B.A. ..... 1898
Davis, N. A., M.D ..... 1898
Davidson, Myers, M.D ..... 1864

Brandon, Man.Ottawa.1885 Carman, Man.1907 Kingston, Jamaica.tawa.

Topog. Survey Dept., Ottawa.

Carman, Man.
Kingston, Jamaica. tawa.

Brockville.
Brockville.
Blenheim, Ont.
Brooklyn, N.Y.
Almonte.
Galt.
Agricultural Coll P.O. Mich.
389 South Hohman St., Hammond, Ind.
Toronto.
Chippewa.
Kenora.
West Bay City, Mich.
Easton's Corners.
Toronto.
New York, N.Y.
Nanaimo, B.C.
York, Grand River.
Parry Sound.
Toronto.
Fallowfield.
(Deceased.)


Date of
Name.
Dingwall, James, B.A. Graduation. Address.
B.A.. .. .. .. 1861 Cornwall.

Dingwall, M., B.A.. . . . . . . . . . 1903 Cornwall.
'Dingwall, R., B.A. . .. ......... 1907 Cornwall.
Dixon, Andrew F., M.D. . .. .. 1890
Dixon, John W., M.D.. . . . . . 1890
Dixon, Mortimer L., M.D. . ... 1886
Dobbs, G. G., B.Sc. . ............... . . 1906
Doherty, F., B.A. . . . . . . . . . . . 1907
5Dolan, G., B.A. . . . . . . . . . . . . 1899
Dolan, John H., B.A. . . . .. . .. 1897
Donald, Helen, B.A. ............... 1906
*Donald, William, D.D . . . . . 1861
Donald, William, B.A. . . . . .. 1873
*5, $_{5}$ Donnell, J. A., M.A.
1902
Donnelly, J., jr., M.E. . . . . . . . 1898
Donevan, F. J., M.D. . . . ....... 1907
Donovan, Edward, M.D.. ... .. 1886
Donovan, Gertrude........... .. 1900
Donovan, Mary (Melville), B.A. 1892
Donovan, Patrick C., M.D.. .... 1879
Douglas, Harry E., M.D. . . . . . 1892
Douglas, H. E. N., M.D. . . . ... 1897
Douglas, James, B.A. . . . . .... 1858
Douglas, Robt., B.A., 1851 ; M.D. 1855
Dow, John Ball, B.A. . . . . . .. 1875
Down, G. W., B.A. . . . . . . . . . 1905
Downey, R. F., B.A. . . . . . . . . . 1907
Downing, James J., B.A.. .... 1881
Downing, Jos. J., B.A., '92; M.D. 1896
Downing, William H., M.D..... 1888
Dowsley, David H., M.D.. .. .. 1875
Dowsley, George C., M.D. . .... 1875
Dowsley, W. C., M.A. . .. .. . . 1898
Doyle, J. D., M.D. . . . . . . . . . . 1898
Drennan, Ethel, B.A.. ... .. .. 1900
Drennan, Jennie G., M.D. . .. .. 1895
Driscoll, A. C., M.D. . . . . . .... 1904
Drummond, Andrew T., B.A., 1860 ; LL.B., 1863 ; LL.D.... 1896
*Drummond, Daniel R., B.A.,'89; M.A., 1890 ; B.D.

1892
Drummond, Francis A., B.A..... 1877
Drummond, Peter, M.D. . ... .. 1889
*Drummond, William J., B.A... 1885
Drummond, S. J., M.D.. .. ... 1897
*Duclos, John E., B.A. . . . ... 1884
Dudley, W. H., M.D. ............. 1905
*Duff, A., D.D. . . . . . . . . . . . . . 1903

Burlington, Iowa.
Frankville.
Fossil, Alabama.
Belfast, Ireland.
Berlin H. S.
Picton.
Montreal.
(Deceased.)
Pilot Mound, Man.
Haileybury, New
Ontario.
Kingston.
Gananoque.
Langdon, Dak.
S. Wellington, B.C.

Bakersville, Vt.
Neche, N. D.
Muncie, Ind.
Kingston, Jamaica.
99 John St., N.Y.
(Deceased.)
Whitby.
Erin.
Port Perry.
(Deceased.)
Chesley.
(Deceased.)
Ottawa.
Gore Bay.
Athens H. S.
Brooklyn, N. Y.
St. Thomas.
Trenton.
Toronto.
Hamilton.
Winnipeg.
Grant. Mich.
Nanking, China.
Casnovia, Mich.
Valleyfield.
Pembroke.
Bradford, Eng.


Date of
Name.

Edmison, G. A., B.A. . . . . . .. 1898
*Edmison, J. H., B.A. . . . . . . . . 1898
Edwards, C. B., B.A.. ... . . .. 1900
Edwards, Cephas H., B.A. . .... 1896
Edwards, J. J., B.A.
Edwards, J. W., B.A., 1900 ; M.D. 1900
Elder, Hosie, M.A. . . . . . . . . . 1905
Eldon, R. H., B.A. . . . . . . ... 1901
Elliott, Arthur R., M.D.. .. ... 1889
Elliott, Edwin, B.A. . .. . . ...... 1886
Elliott, Emly M., B.A. . . . ..... 1907
Elliott, Gilbert John, Earl of Minto, G.C.M.G., LL.D
Elliott, H. H., M.D.
*Elliott, Jas., (Professor Wesley Thẹological College), Ph.D... 190

Elliott, John, B.A.
Elliott, Thomas A., B.A. . .. .. 1879
Elliott, Walter H., B.A. . . . . . . 1894
Ellis, D. E., B.A.... . . . . . . . . . 1907
Ellis, F. J., M.D. . . . . . . . . . . . 1903
Ellis, G. E., B.A. . . . .. . . . . . . 1901
Elmer, William W., M.D. . .. .. 1858
Elwell, W. D., M.D. . . . . . . . . . 1863
Embury, Alex. T., M.D. . . . ... 1896
Embury, Elizabeth, MD. . .. ... 1888
Emery, George F., M.D. . . . . . 1889
Emery, Horatio J., M.D. . . . . . . 1884
Empey, Charles T., M.D. . . . . . 1880
Empey. William A., M.D. . .. .. 1881
Erly, Francis W. J., M.D. . . . . . 1868
Errett, Alfred J., M.D. . . . . . . . 1887
Errett, Bessie D., B.A. . . . .. . . 1904
Eshoo, S. O., M.D. . . . . . . . . . . 1902
*Etherington, Edward J., B.A... 1891
Etherington, F., M.D. . . . . . . .. 1902
Evans, Henry, M.D
Evans, Henry A., M.D. . . . .. .. 1878
*Evans, Joseph. B.A., 1855; M.A. 1857
Everts, H. A., B.A.
Ewart, W. M., B.A. . . . . . .... 1898
Ewing, Florence M., B.A... .... 1903
11Ewing, William C., M.A. . ... 1895
Fadden, W. S., M.D.. . . . . .... 1898
Fahey, E. W., M.D.. . . . . . ..... 1901
Fairbairn, Archibald C., M.D... 1871

1906

1889
Russell, Man.
Cheltenham.
London, Ont.
Keene.
Burritt's Rapids.
Cataraqui.
Toronto.
Toronto.
Chicago.
Kingston.
Agincourt.
1899
1898
Seeley's Bay.
Wesley Coll., Winnipeg, Man.
Leamington.
Toronto.
Kingston.
Regina, Sask.
Edmonton, Alta.
Spokane Falls, Wash.
(Deceased.)
Bancroft.
Ottawa.
Ottawa.
Cross Hills, Leeds, Eng.
Spencerville.
(Deceased.)
(Deceased.)
Chatham.
Tabriz, Persia.
Hamilton.
Portsmouth.
(Dcceased.)
(Deceased.)
Lyn.
Smith's Falls.
Cataraqui.
C. I., Ottawa.
(Deceased).
Duluth, Minn.
Minneapolis, Minn.

Date of

## Name.

Fairfield, Charles A. D., B.A Graduation.

Address.

Fairlie, J., B.A., 1905; M.A...... 1906
Fairlie, T. U., B.Sc. .. . . . . . . . . . 1905
Fairlie, M. F., B.Sc. . . . . . . . . . 1902
Falconer, John P., B.A.
1889
Falkner, A. D., M.D. . . . . . . . . . 1904
Falkner, J., B.A. . . . . . . . . . .. 1903
Farley, Frank J., M.D. . . . . . . . 1894
Farnham, M. M., B.A. ............ 1906
Farrell, Alexander G., B.A.. ... 1885
Farrell, James M., B.A. . . . ... 1889
Farrell, J. T., M.D.
Kingston.
Farrell, Thomas H., B.A., 1889 ; M.A., 1890 ; M.D.

Farquarson, R. A., B.A.. .. ... 1898
Feasby, W. J., B.A.
Fee, Samuel H., M.D
1907
*F, S M B A
*.
Feek, Robert G., B.A. . ... . . .. 1882
*Feir, Harry, B.A. . . . . . . . . . 1895
11Fenwick, Árthur M., M.A.. . . 1890
Fenwick, Kenneth N., B.A., 1871; M.A., 1874 ; M.D... . . . . .. 1874

Fenwick, Thomas M., M.D. . .. 1864
Ferguson, Allen G., M.D.... ... 1887
Ferguson, Archibald, B.A. . . . . 1883
Ferguson, A. A., M.D. . . . . . . . 1904
Ferguson, C. A., B.A. . .. . . . . . 1897
Ferguson, Charles F., M.D. . ... 1859
Ferguson, E. A., M.D......... 1904
Ferguson, Edwàrd G., M.D. . .. 1863
Ferguson, George A., B.A.. .... 1894
*Ferguson, George D., (Professor, Queen's Univ.), B.A... 1851 *Ferguson, Jacob Y., B.A., 1902 ; M.D.

Ferguson, James D., B.A.
1905
Ferin Jan B.A. .... 180
Ferguson, James F., B.A. . .. .. 1862
*Ferguson, J., B.A. . ...... .. .. 1904
*Ferguson, John, B.A., 1876; M.A., 1878; B.D

1879
Ferguson, John J., B.A. . . . .... 1907
Ferguson, M., B.Sc. . .. . . . . .. 1904
5Ferguson, Robert, B.A.. .. ... 1882
Ferguson, Robert B., M.D.. .... 1863
Ferguson, Thomas B., B.A.. ... 1863
Ferguson, T. R., M.A... .. .. .. 1904
Ferguson, W., B.A.

Date of
Name
Ferguson, William B., B.A. Graduation.
*Ferguson, T. J. S:, B.A........ 1898
Fernow, B. E., LL.D.. . . .. .... 1903
Ferrier, G. C., M.D
1900
Fetterly, H. B., B.A
Fielding, Hon. Wm. Stevens, (Minister of Finance, LL.D..

1903 Ottawa.
File, Albert J., M.D. . . . . . .. .. 1869
8Findlay, John, B.A., 1887; M.A. 1888
2Finlay, William A., B.A.. .... 1888
Finlayson, D. K., B.A. ............ 1905
Finlayson, M. D., B.Sc. . . . . . . 1903
Finlayson, R. A., B.A
Finn, J. P., B.A
1898
Finnie, $H$. $V$., B.Sc.
Firth, W. P., B.A., 1900; M.A., 1901; D.Sc.
Fisher, Albert .J, M.D. . . .... 1887 Brigden.
Fitchett, H. H., B.A., LL.D.... 1899 Melbourne, Aus.
Fitzgerald, Eliza S., B.A., 1884; M.A.

Fitzgerald, Gerald D., M.D. . ...
1899
*Fitzpatrick, Alfred, B.A.
1894
Flath, Emma S., B.A. (Lawlor)
*Fleck, James, D.D
1889

Fleming, A. G., B.A.
Fleming, Hugh P., M.D.........
Fleming, Maud E., B.A., 1903; M.A.
*Fleming, David, B.A... ........ 1887
Fleming, W. S., B.A.. . . . . . . . 1905
*Fletcher, D. H., D.D.
1903
Fletcher, Jas., F.R.S.C., LL.D.
Fletcher, John, (Professor, Toronto Univ.) M.A., LL.D.

1896
1896
11Fletcher, W. H., M.A. . . ... 1902
Fletcher, William P., B.A.
Foik, H. J., B.A.
Foley, D. E., B.A.
1896
Fole, D B........ 1907
Foley, Declan E., M.D
1886
Foley, Ignatius J., M.D. . . . .... 1891
Foley, T. B., M.D.......... 1903
10Folger, Howard S., B.A. . .... 1887
Folger, Matthew H., B.A.
1885
14Ford, A. B., M.A., 1894; M.D. 1897
Ford, C. Y., M.D... . ..... .... 1900
(Deceased.)
Didsbury, Alta.
Ithaca, N.Y.
South Mountain.
Winchester.

Ameliasburg.

Grand River, Richmond Co., N.S.
Transcontinental Ry., Grand Falls, N.B.
Odessa, Wash.
Kingston.
Peterboro.
Toronto.

Niagara Falls South.
(Deceased.)
New Liskeard.
Alexandria H. S.
Montreal, Que.
Ottawa.
Craigleith.
Stratlecona, Nita.
Franktown.
Hamilton.
Ottawa.
Toronto.
Toronto Junct. C. I.
Drayton.
Portage La Prairic.
Kingston.
Westport.
(Deceased.)
Kingston.
New York.
Oshawa.
Dansville, N.Y.

Date of

## Name.

Ford, Henry B., M.D. Graduation. Address.

1885

Ford, Herbert D., M.D
*Forest, John, D.D., (Principal Dalhousie College).. .. ... 1863
Forfar, Lena M., B.A. (Kennedy) 1903
Forin, Alexander, M.D. . . . .... 1894
Forrester, Edgar, B.A., '82 ; M.D. 1884
Fortescue, Charles, B.Sc. . .. ... 1898
Foster, Jessie, B.A..... .. .... 1907
Foster, Robert J., M.D. . ...... 1859
*Fotheringham, R. H., B.A. . . . 1903
Fowkes, John T., M.D. . . . ... 1891
Fowlds, Mary T., B.A. . . . .... 1896
Fowler, Annie L., B.A. . . . .... 1884
Fowler, Fife, M:D... .. .. .... 1863
5Fowler, Henry C., B.A. ..... 1881
Fowler, Jennie (Kilborn), B.A. 1890
*Fowler, William J., B.D.. .... 1888
*Fowlie, A. J., B.A.. .. .. .... 1901
Fox, Catherine H. C., B.A.... .. 1902
Fox, Charles B., M.A.. . . . . .. 1894

Halifax.
Prince Albert, Sask.
Edmonton, Alta.
Brockville.
Pittsburg, Pa.
Dunnville.
(Deceased.)
Pettapiece, Man.
Lafrageville, N.Y.
Hastings.
Kingston.
(Deceased.)
Toronto.
(Deceased.)
Kirkland, N.B.
Erin.
Mountain Grove.
Supt. Pittsburg Reduction Co., St. Louis, Ill.
Fox, Edward C., M.D. . . . . . . 1864
Foxton, $\cdot$ Edward, M.D. . . . . . . . 1884
Foxton, Joseph, B.A. . ....... 1886
Fraleck, Judge Edison B., B.A.. 1863
Fraleck, E. L., B.A. . . . . . .. . . 1897
Franklin, Benjamin W., M.D... 1856
Fraser, Annie E., B.A. .......... 1897
Fraser, Anson S., M.D... . . . . . . 1869
Fraser, Alexander G., B.A. . .... 1852
Fraser, Archibald, B.A.. .. .... 1848
*Fraser, Donald, B.A., '64; M.A. 1866
Fraser, D. J., B.A.. . . .. ....... 1907
Fraser, George, L.B., B.A. . .... 1870
Fraser, Helen F., B.A. . . . . . . . . 1901
*Fraser, James, B.A. . .. .. ..... 1865
*Fraser, Jas. R., B.A., '93; M.A. 1895
Fraser, John, M.A., LL.D. . ... 1887
Fraser, John B., M.D. . . . . . . . . 1888
*Fraser, John F., B.A. . . . .... 1869
Fraser, John M., B.A., 1857; M.D 1861
*Fraser, Joshua, B.A. . . . . . . . 1858
Fraser, Robert N., M.D. . .. ... 1884
Fraser, Wilhelmine G., M.D.... 1890
*Fraser, William, D.D.. . . .. . . 1878
Fraser, William A., B.A........ 1898
*Fraser, Thurlow, B.A., '98; B.D. 1898

Ottawa.
Kingston.
Belleville.
Belleville.
Seattle, Wash.
Sarnia.
(Deceased.)
(Deceased.)
(Deceased.)
Whitby.
Ottawa.
Hamilton.
Cushing, Que.
Uxbridge.
Maitland, Aus.
Toronto.
(Deceased.)
(Deceased.)
Thamesville.
India.
(Deceased.)
Marion Bridge, N.S.
Portage la Prairic.

Date of Graduation. Address.

Frechette, Louis H., LL.D. . ... 1881 Montreal.
Freeland, Anthony, M.D. . . . . . 1889 Ottawa.
Freeman, Albert E., M.D. . . . . . $188 \%$ Inverary.
Frizell, J. R., B.A. . . . . . . . . . . 1897
Froats, James, B.A.
Froats, W. C., M.A.
Froiland, Herb. M., B.A., 1882; M.D. . . . . . . . . . . . ....

Fuller, Wm. H., B.A., 1867; M.A
Fulton, Cyril, M.D.
Funnell, Ada A., M.D.
Funnell, Rozelle V., M.D. 1906 1904

$$
1883
$$

11 Furlong, Thomas H., M.A.
Gage, H. E., M.D. 1873

Gage, J. E., M.D. 1894Gage, R. G., B.Sc1887
Galbraith, J., (Principal, Schoolof Practical Science) LL.D.

1903
Galbraith, John E., M.D. . . . . . 1880
Galbraith, R. B.A.
1897
Galbraith, T. M., B.A. ........... 1906
Gallaher, Morton, M.D. . . . . . . . 1887
*Gallaher, John, B.A... ..... .. 1878
Galligan, Thomas D., M.D... .. 1886
Gallivan, J. V., M.D. . . . .. ... $19 n 4$
4, $5^{*}$ Gandier, Alf., B.A., '84; M.A 1887
Gandier, Augustin, M.D.. .. .. 1890
*Gandier, Daniel McG., B.A.. .. 1894
Gandier, J. C., B.A.. . . . . . . . . 1901
Gardiner, R. J., M.D. . . . . .... 1891
Gardiner, Sydney H., B.A., 1887; M.D., 1889; M.A.. .. .... 1890

Garrett, Richard W., M.D., (Professor, Queen's University.
Gaudet, E. A., M.D.... .... ....
Gavin, Frederick P., B.A. . .... 1896
Gavin, W. F., M.D.... .......... 1906
Geddes, Robert W., B.A. . . . . . . 1896
Geddes, W. J., M.D. ............. 1905
*Geddie, John, D.D. . . . . . .... 1866
*Geikie, A. Constable, LL.D.... 1884
*Geikie, J. Cunningham, D.D... 1871
Genge, T. S., M.D. . . ... . . .. 1901
Genge, William W., M.D. . .... 1891
Gerin, John, M.D.. .. . . . . .... 1872
Germain, H. A., B.Sc. . ... . . . $190 \%$
Gibson, Albert E., M.D.
1887
Gibson, Ethel B., B.A.
1905

Whitewood, Assa.
Finch.
Morrisburg.
(Deceased.)
(Deceased.)
Lyons, N.Y.
(Deceased.)
Hamilton.
Simcoe.
Paisley.
Ithaca, N.Y.

Toronto.
(Deceased.)
Mt. Forest.
Thornbury.
Bay City, Mich.
(Deceased.)
Eganville.
Long Island City, N.Y.

Toronto.
Sherbrooke, Que.
San Bernardino, Cal.
Newburgh.
Seeley's Bay.
Brooklyn, N.Y.
Kingston.
Far Rockaway, N.Y.
Windsor.
Lancaster.
Ville St. Louis, Que.
Arden.
(Deceased.)
(Deceased.)
(Deceased.)
Holleford.
St. Johnsbury, Vt.
Auburn, N.Y.
Kingston.
Oakland, Iowa.
Kingston.

Date of
Name.
Gibson, A. S., B.A.. . ... . . .... $1904^{\circ}$ Kingston.
Gibson, Andrew M., M.D.
Gibson, H. A., M.D.
Gibson, J. Copeland, M.A., 1892 ; M.D

Gibson, James C., M.D
Gibson, James F., M.D
Gibson, James D., M.D
Gibson, James L, M.D
Gibson, John J., M.D. . . . . . .. 1893
Gibson, Wm., M.D.
Gibson, William J., B.A., 1874 ; M.D., 1881 ; M.A. . . . . . . 1882

Gildersleeve, James P., LL.B.... 1863
Giles, George C., M.D. . . . .... 1893
Giles, John G., M.D
1860
Gilfillan, James, B.A. . . . . . . . . 1896
*Gill, Henry, D.D
1865
Gillen, Erastus, M.D. . . . . ... 1894
Gillespie, Henry M., M.D. . .... 1896
Gillespie, J. J., M.D.. . . . . . ... 1904
Gillies, D. A., B.A.
Gillies, George, B.A.
1905
Gillies, 1884
Gillies, Neil, M.D. . . . . . . . . . . 1871
Gillies, William F., B.A. . . . ... 1891
Gillis, Angus B., M.D.
1888
Girvin, A. W., M.D. . . .... .... 1905
12Givens, David A., B.A. . . . . . 1878
Givens, Hannah A., (Marshall) B.A.

1887
Givens, William R., B.A.. .. .. 1888
*Glassford, Thomas S., B.A. . .. 1875
Gleeson, James H., M.D. . . . .. 1864
Gleeson, J. V., B.Sc. . . . . . . . . 1904
*Glover, Thomas J., B.A.
1894
4Gober, Mai, (Agnew) B.A., 1898; M.A.

1899
Goldschmidt, Victor, (Professor of Mineralogy, Heidelberg University) LL.D.
Goodchild, J. F., M.D. . .. ... .. 1899
Goodfellow, J., B.A. . . . . . . .... 1900
Goodfellow, J. R., M.D.. ... ... 1904
Goodfellow, T. J., B.A. . .. .... 1907
Goodwill, J. E. L., B.A. . . . . . . . 1903
*Goodwill, T. W., B.A.. . . ..... 1898
Goodwill, V. L.:M.D
1899
Goold, Arthur J., B.A.
1883
Gordanier, W. N., B.Sc. . . . .... 1903

Hamilton.
New Haven, Mich.
Kingston.

Alexandria, Ind.
Emerald.
Belleville.
Kingston.
Marne, Iowa.
(Deceased.)
Bowmanville.
England.
(Deceased.)
Elma, Iowa, U.S.
Morrisburg.
Carleton Place.
Toronto.
Brandon, Man.
(Deceased.)
Salem, Ore.
Stella.
Kingston.
(Deceased.)
Florida.
Alberni, B.C.
(Deceased.)
Parry Sound.
Ernesttown.

Date of
Name
*Gordon, James, B.A., 1851; M.A. 1854 (Deceased.)
Gordon, John G., B.A. . .. . . . . 1861
Gordon, Annie E., B.A. . . . . . . . 1897
Gordon, C. D., M.D.
1906
*Gordon, D. L., B.A.
4Gordon, Wilhelmina, M.A. . . . 1905
*Gould, S. H., B.A., M.D. . . . . . 1897
8Gould, W. H., M.A. . . . . . . . . 1900
*Gow, Robert, B.A.
1883
3*Govan, Arpad, B.A........ 1883
Gowan, James R., C.M.G., LL.D.
1884
*Graham, Archibald, B.A. . ...
1892
Graham, C. W., B.A., 1905; M.D.,
Graham, D., M.D.
1906
Graham, Elsie K., (Murray) B.A. .
1902
Graham, Hedley C. W., M.D...
1902
Graham, J. A., M.D. . . . . . .... 1904
Graham, P. E., B.A.
1898
Graham, R. R., B.A.
1902
Graham, S. N., B.Sc. . . . . . ....
Grange, Thomas A., B.A. .
1900
Grange, William A., B.A.
1895
Grant, A. F., M.D
1898
Grant, Ethel I., B.A. . ... .. ..... 1903
Grant. H. M., B.A., M.D........ $1889^{-}$
*Grant, Hugh R., B.A. . . . . . . 1883
*Grant, James A., B.A.
1878
Grant, J. R., B.Sc. . . . . . . ..... 1905
*Grant, Kenneth A., M.A., D.D.
Grant, Norman M., B.A., 1886; M.D..

1893
*Grant, Peter, D.D. . . . . . . . .
*Grant, Willian, D.D. . .. $\quad$....
1,2Grant, William L., M.A., (As-
sistant Professor in Colonial
History) History)
Grass, Margaret F., B.A.... .... 1907
1894
Grasse, Sydney D., M.D. . . . . . . 1864
Gray, D. W., M.D.... . . . . ... 1904
Gray, Henrietta A., B.A.. ... .. 1899
*Gray, John, D.D., B.A., 1874; M.A.... ... . . . . . . . ... 1876
*Gray, S. Harper, B.A. . . . . . . . . 1894
Gray, T. J., M.D. . . . . . . . . . . 1904
Gray, William A., M.D..... .... 1890
Greaves, George A., M.D. . .... 1907

1897 Forrester's Falls.

1889 Auckland, New Zealand.
1868 (Deceased.)
1883 (Deceased.)
Ottawa.
Kingston.
Bryn Mawr., U. S.
Nablus, Palestine.
Winnipeg.
Beaverdale, Man.
Williamstown.
Barrie.
Parkhill.
Kingston.
Elm Creek, Man.
Toronto.
Rochester, N.Y.
Montreal.
Prince Albert, Sask.
Athens H. S.
Guanajuato, Mexico.
(Deceased.)
Napanee.
Peterboro.
Martintown.
Auckland, N. Zealand.
New Glasgow, N.S.
Richmond Hill.
Chesley.
San Fernando, W.I.

Oxford Eng.
Kingston.
(Deceased.)
Bowden, Alta.
Kingston.
Orillia.
Dundas.
Kingston.
Pembroke.
Kingston.

Date of
Name. Graduation.

1891
Green, Samuel D., M.D
1899
Greenhill, Eva M., B.A. (Young)
Grenfell, Caroline P., B.A.. .... 1899
Grenfell, M. Elizabeth, B.A. . . . 1899
Grey, Earl, Gov.-Gen., LL.D. . . . . . 1905
Grey, J. M., B.A. . .. . . . . . . . . 1903
4Grey, S. L. H., M.A. . . . . . . . . 1903
Griffin, A. D., B.A. . . . . . . . . . . 1901
Griffin, E. Scott, B.A. . . . . . . . . 1884
Griffith, Agnes J., M.A.. .. ... 1896
Griffith, Edna B., B.A. . .. ...... 1896
Grimshaw, M. E., M.D. . . . . . . . . . 1905
Grimshaw, W. S., M.D. . . . .... 1901
Grove, W. G., B.A. . . . . . . . . . 1905
Grover, G. A., B.Sc. . . . . . . . . . 1902
Grover, J. I., B.A
1907
28Guess, George A., M.A. . . . . . 1894
Guess, Harry A., M.A. . . . . . . . 1895
7Guggisberg, W. W., B.A. . .... 1904
Gunsolus, Kenneth, M.D. . . . . . 1871
2SGuy, R. D., M.A. . ... . . .. . . 1905
*Guy, W. A., B.A., 1897; B.D... 1901
Hackett, Joseph, M.D. . . . . . .. 1858
Hadden, A. T., B.A. . . . . . ... 1905
Hagar, A. E., B.A. . . . . . . . . 1902
Hagar, Frederick C., M.D. . .... . 1895
Haig, Andrew, B.A., 1888; M.A., 1889 ; M.D.
Hainer, F. L., B.A.
Hales James, BA 1888: LI B 1893
6Hall, J. R., B.A., 1897; M.A... 1898
Hall, T. F., B.A.
1901
Hall, W. A., B.A., 1898; M.D... 1900
Halladay, R. W., B.A., 1902 ; M.D. . 1905
Hallett, W. J., B. A............... . 1906
Halliday, Henry, B.A... . . . . .. 1884
Hamilton, Andrew, B.A. . .. ... 1855
Hamilton, David, M.D. . . . .... 1862
5, 21Hamilton, Charles F., M.A.. 189.J
Hamilton, David J., B.A.. .. .. 1895
Hamilton, Jno. A., B.A., '77; M.D 1886
Hamilton, J. C., B.A. . . . . . . . . 1897
Hamilton, W. J., B.A. . ........... 1906
Hamm, B. N., B.A.. . . . . ..... 1899
Hanley, A. T., B.A., M.A. . ... 1899
Hanley, G. J., M.D. . . . . . . . .. . 1902

Prescott.
Naksup, B.C.
Ottawa.
Kingston.
London \& Lanc. Life, Regina, Sask.
Woodstock.
Winnipeg, Man.
St. Thomas.
London.
Helen Mine.
Kingston.
Ringwood.
Torunto.
Norwood.
Gananea, Sonora, Mexico.
Winnipeg, Man.
Detroit, Mich.
Wimnipeg, Man.
MacDonald's Corners.
(Deceased.)

Smith's Falls.
Campbellford.
Baleville, N. J.
Toronto.
Sarnia.
Cobourg.
Walkerton.
Elgin.
Barrie.
(Deceased.)
(Deceased.)
Batavia, N. Y.
Ottawa.
(Deceased.)
(Deceased.)
Campbellford.
Kamloops, B.C.
Date ofGraduation. Address.
Hanley, J. H., M.D ..... 1900
Hanley, Robert, M.D. ..... 1893
Hanna, James E., M.D. ..... 1886Harcourt, Hon. Richard (Minis-ter of Education), LL.D....Harding, William E., M.D1903
Hare, William G., M.D. ..... 1892188.
Harkness, Fred B., M.D ..... 1889
36, 4Harknesss, Mary Dell, M.A. ..... 1906
Harkness, Thomas F., B.A.
Harpell, J. J., B.A ..... 1902
Harper, A. M., B.A. ..... 1900
Harper, John M., B.A. . ..... 1882
Harrington, A. W., M.D. ..... 1881
Harris, J. Alton, M.D ..... 1899
Harrison, Edgar D., M.D. ..... 1891
Harrison, F. W., B.A. ..... 1906
Harrison, T. S., M.D ..... 1865
Hart, John F., M.D ..... 1887
Hart, Michael W., M.D ..... 1887
*Hart, Thomas (Professor, Mani-toba College), B.A., 1860;M.A., 1868 ; B.D., 1880 ; D.D.1902
Harten, Geo. H., B.A. ..... 1902
*Hartwell, George E., B.A. ..... 1889
Harty, J. J., M.D. ..... 1897
Harvie, William D., M.D ..... 1889
Harvey, Albert E., M.D ..... 1869
Harvey, Catherine, B.A. (Cowley) ..... 1897
Harvey, J. F., B.A ..... 1902
Hasken, B., M.D. ..... 1903
Hastings, F. R., M.D ..... 1900
Haughton, C., B.A ..... 1907
Hawes, Ida E., M.A ..... 1905
Hawley, A. T., M.A ..... 1899
Hawley, Gilbert T., B.A. ..... 1897
7Hay, Arthur G., B.A., '89; M.A. ..... 1899
4, 7, 13, *Hay, Jno., B.A., 1882 ;. .
B.D.188.5
Hay, William, B.A., 1883 ; M.D.. ..... 1887
Hay, W. McD., B.A. . ..... 1905
Hay, W. McD., B.A.............
Hay, W. McD., B.A............. 5, 7, 16Haydon, Andrew, M.A., 1893 ; LL.B
Hayes, William J., B.A ..... 1890
Hayunga, George, M.D ..... 1890
Hazlett, J. W., B.A., 1901; B.Sc. ..... 1903
1Heap, Frederick, M.A. . ..... 18901896 Ottawa.

Kingston. Kingston. Ottawa.

Toronto.
Brockville.
(Deceased).
North Gower.
Sault Ste. Marie.
(Deceased.)
Toronto.
Vancouver, B.C.
Quebec.
(Deceased.)
43 Exchange Pl., New York.
Madoc.
Richmond Hill.
Selkirk, Man.
Athens.
Frescott.

## Winnipeg.

Chentu, China.
Kingston.
(Deceased.)
Ottawa.
Newmarket.
Greenbush.
Darton, Vt.
Hemmingford, Que.
Pasadena, Cal.
Napanee.
Killarney, Man.
Renfrew.
Snake River, Ont.
Kingston.
Ottawa.
(Deceased.)
502 Canal St., New York.
(Deceased.) Selkirk, Man.

Date of
Name.
Graduation.

Address.
Heath, Frederick C., B.A., 1878;

Heenan, Daniel, B.A.. .. .. ... 1843
Heeney, T. F., B.A. . . . . . . . . . 1898
Heggie, David, M.D. . .. .. . ... 1865
Henderson, Donald, M.D... . . . 1858
Henderson, E. Mabel, M.D.. ... 1892
21Henderson, George F., B.A... 1884
Henderson, E. W., B.Sc. . . . . . 1905
Henderson, Johnson, B.A. . . . .. 1885
Henderson, Kenneth, M.D...... 1883 (Deceased.)
Henderson, Norman R., M.D.... 1895 London.
Henderson, William, M.D. . ... 189.5
*Henderson, William, D.D..... 1862
Henderson, William H., M.D... 1879
Henry, George, M.D. . .. .. .... 1869
Henstridge, Elizabeth, M.A.. .. 1897
Herald, Dundas, M.D. ....... 1891
24Herald, John, B.A., $18 \% 6$; M.A., 1880; M.D.
Herald, R. T. Wilson, M.D. . ... 1890
*Herbison, Robert, M.A.... .... 1896
*Herbison, William J., B.A. . ... 1895
Herchmer, Ethel M.,(Tett) B.A. 1901
Hermiston, George M., B.A.. .. 1895
Herriman, Weston LeRoy, M.D. 1855
Herrington, Anthony W., M.D.. 1881
Herriot, G. H., B.Sc. . . . . . ... 1907
Heslop, John E., M.D. . . . . . . 1887
3(a)Hewton, Gertrude, M.A.... 1903
Hickey, Daniel C., M.D....... 1883
Higgins, Edward M., M.D..... 1877
Higginbotham, William, M.D... 1871
Hilker, Adam E., M.D.. .. .... 1889
Hill, F. L., M.D
1897
Hill, James, M.A 1906
Hill, J. T., M.D. . . . . . . . . . . . ... 1902
Hills, W. H., M.D... .. .. . . . .... 1898
Hillier, Solomon C., M.D.. ..... 1869
Hillier, William, M.D.. .. .. .. 1855
Hindle, George. B.A.
1899
Hingston, Sir William, (Professor, Faculty of Medicine, Laval University) LL.D....
$9 H i s c o c k$, R. C., M.A., ' 96 ; M..$\ddot{D}$.
Hiscock, Reta W., B.A.

1903
1900
1905
(Deceased.)
Kingston.
Kingston.

Brantford.
(Deceased.)
Lansdowne.
Brampton.
Emerson, Man.
Hamilton.
Ottawa.
Pittsburg, Pa.
(Deceased.)
(Deceased.)
(Deceased.)
(Deceased.)
Kingston.
Walsh, Sask.
(Deceased.)
Walsh, Sask.
St. Giles' church, 'roronto.
Denver, Col.
Lacombe, Alta.
Picton.
Lindsay.
(Deceased.)
C.P.R. Maint. Dept., London.

Kingston.
(Deceased.)
(Deceased.)
Walkerton.
Hamilton.
Seaforth, N. S.
Harrington West, Ont.
Napanee.
Acadia Mines, N.S.
Bowmanville.
(Deceased.)
Kaslo, B.C.

Date of
Name
Hoag, James P., B.A.
Hoare, Walter W., M.D.
Hodge, George, M.D., (Professor
Western University)
*Hodges, James, B.A.
20Hodgson, R. T., M.A
Hoffman, George C., LL.D.
Hogan, J. T., M.D
*Hogg, John, D.D. . . . . . . . . . . 1871 (Deceased.)
Holdcroft, Joseph, M.D. . . .... 1889 (Deceased.)
Holdcroft, W. T., B.A., '88; M.D 1890 Havelock.
Holmes, F. S. LeRoy, M.D.. .. 1877 Kemptville.
*Hooper, Ebenezer, M.D.. .. .. 1885 Toronto.
Hooper, Edm. J., B.A., '58; M.D. 1861 (Deceased.)
Hooper, Josephine A., (Robertson) B.A.
Hope, James A., B.A., 1862; M.A 186.1
Hoppin, L. W., B.A., 1903; M.D. 1904
Hord, A. H., B.A., 1899 ; M.A. . 1901
Horsey, Alfred, M.D. ... .. ... 1865
Horsey, Edward H., M.D. . .... 1860
Horsey, Edward H., M.D. . .... 1883
Horsey, Florence M., B.A. . .... 1902
Horsey, Henry H., B.A.. .... .. 1895
$3^{*}$ Horsey, H. E., B.A., '86; M.A. 1887
Horton, C. W., B.A.
Horton, Robert N., M.D
1899
Hossie Thomas R M D ... .. 1870
Hourigan, Andrew B., M.D.. .. 1877
Hourigan, J. M., M.D............. . 1905
Houser, W. H., B.A.
1907
Houston, D. H., M.D. . . . . . . . 1903
Houston, D. W., B.Sc............. . . 1907
Houston, William R., M.D. . ... 1871
Howell, George W., M.D
1867
Howells, Thomas B., M.D.. .... 1863
Hoyles, N. W., B.A., LL.D.... 1902
Hubbs, Henry A. M., M.D...... 1877
Hudson, Charles H., M.D. . .... 1896
Huff, J. S., B.A. . . . .... . ...... . 1907
Huff, S., B.A.
1902
Huffman, A. F., B.A.
1900
Huffman, F. G., M.D. . . . . . .... 1897
Huffman, R. W. M.D. . . . . . ... 1899
Hugo, Frank M., B.A., 1892; M.A., 1893 ; LL.B.. .. ..... 1895

Hughes, R. E., M.D. . . . . . ....... 1902
3, 8Hume, John P., B.A
1881

St. John, N.B.
(Deceased.)
Swift Current, Sask.
Mitchell.
Ottawa.
(Deceased.)
(Deceased.)
Kingston.
Shanghai.
Abbotsford, Que.
Toronto.
Brockville.
(Deceased.)
Peterboro.
Smith's Falls.
Canboro.
Jersey City, N.Y.
Copper Cliff.
Chatham.
Tweed.
(Deceased.)
Toronto.
Belleville.
Meaford.
I.P.S., East Grey.

Gilead.
Oswego Falls, N.Y.
Climax, Minn.
Watertown, N.Y.
(Deceased).
Waterford.
Date of
Name.Graduation.
Hunt, A. H., M.D. ..... 1905Hunt, Sara A., B.A*Hunter, Alexander, B.AHunter, H. A., B.A., '92 ; M.D.Hunter, H. S., B.A.5 Hunter, James McF., M.A..M.A., 1897 ; B.D.1904
18991903
*Hunter, Robert F., B.A., 1892;1883
1901
*Hunter, Robert J., B.A. ..... 1888Hunter, W. R., B.A., '99; M.A.,1900; M.D.
Hurdman, A. G., M.D. ..... 1901
17*Hutcheon, Robert J., M.A... ..... 1892
Hutcheson, James, B.A ..... 1881Hutcheson, J. H., B.A.1905
Hutchison, John, M.D ..... 1886
Hutchison, R. A., B.A. ..... 1904Hutton, Maurice, LL.D.1903
Ide, Wm., B.A. ..... 1907
Igoe, O. A., M.D
Ikehara, Toshi C., B.A. ..... 1903
Ilett, Ambrose E., B.A., '94; M.D1896
Ingall, E. E., B.A.1893Ingersoll, Isaac F., M.D.19031863
Ingram, J. R., B.A. ..... 1897
Instant, Reginald A., B.A. ..... 1895
Ireland, Charles F., B.A. ..... 1860 b
1Ireland, F. Archer W., M.A...M.D.1891
Irvine, William H., B.A., 1877;1896
Irvine, R. W., B.A. ..... 1897
Irving, Lennox, B.A. ..... 1885
Irving, Robert M., B.A ..... 1896
Irving, William G., B.A ..... 1894
Irwin, Arthur W., M.D ..... 1896
Irwin, Chamberlain A., M.D.... ..... 1863
Irwin, R. T., B.Sc. ..... 1907
Irwin, William, B.A. ..... 1896
Jack, George G., M.D ..... 1886Jackson, H. G., B.Sc. .1903
Jackson, V. W., B.A. ..... 1903
James, Charles, M.D.. ..... 1888
James, Herbert J., M.D ..... 1893
James, Michael, M.D. ..... 1887
Jamieson, Alexander, B.A. ..... 1863
Jamieson, Alison, M.D ..... 1892
1861

(Deceased.)
1903

## (Deceased.)

Bridgetown, Barbadoes.
Pakenham.
Antler, Sask.
Smith's Falls.
(Deceased.)
Miniota, Man.
Arnprior.

Ottawa.
Torunto.
Brockville.
Saskatoon, Sask.
(Deceased.)
Walsingham.
Toronto.
Ottawa.
Tarrytown, N. Y.
Japan.
Watertown, N.Y.
Trenton H. S.
Picton.
Lindsay.
Emerald.
Tacoma, Wash. New York, U.S.A.

Pembroke.
Riverside, Cal.
Riverside, Cal.
Oswego, N.Y.
(Deceased.)
Cobalt.
Stratford.
(Deceased.)
Transcontinental
Ry. Survey.
Auckland Dist., N.Z.
Sylvan.
Bathgate, N. Dakota.
Mattawa.
(Deceased.)
London.

Date of Graduation. Address.
Jamieson, Archibald, M.D. . .. 1886 Galetta.
Jamieson, David, M.D....... .. 1888 Kars.

Jamieson, Georgina, (Huffman) M.A... . . . .. .. .. .. .. 1899

Jamieson, H. T. A., M.D. ..... 1906
Jamieson, John, M.D. . . .. ... 1881
Jamieson, Thomas J., M.D.
1888
James, E. J., LL.D.. . . . . . . . . 1903
Jaquith, W. A., M.D. . . . . . ... 1898
Jardine, Robert, B.A., '63; M.A., 1866 ; B.D.

1886
Jarvis, Charles E., M.D.. ... .. 1882
*Jenkins, Ebenezer E., LL.D.... 1889
Jenkins, W. E., B.Sc. . . . . . . . . . 1907
Jewett, Albert E., B.A. . . . . . . . 1890
Jewitt, T. J., B.A. . . . . . . . . . . . . . 1906
Johns, C. P., B.A., 1896; M.D. .. 1900
Johnston, Arthur C., M.D....... 1907
*Johnston, Frederick W., B.A... 1886
Johnson, D. B., B.A. . . .. ... 1901
Johnson, William, B.A., '49; M.A 1852
Johnston, Absolom H. J., M.D. . 1862
Johnston, David A., M.D. . .... 1881
Johnston, J., B.A...... ........ . 1906
Jolmston, J. K., M.A.... . . . . . . 1899
Johnston, John W., M.A. . . . . . . 1894
Johnston, G. L., B.A. . . . . . . . . 1897
Johnston, J., B.A.. . . .... .. .. 1897
Johnston, Joshua R., B.A. . . . . 1881
Johnston, T. H., M.D.. . . .. .. 1900
Johnston, W. A., M.A., 1903 ; B.Sc. .

Johnston, William J., M.D. . ... 1891
Johnstone, David, M.D. . . . .... 1868
Johnstone, William H., M.D.... 1889
Joly, Henry G. DeLotbiniere,
LL.D.
1894
Jones, Alfred W., M.D.. ........ 1896
Jones, F. A., B.A. . . . . . . . . . . 1905
Jones, Henry M., M.D. . . . . . . . 1866
Jones, John, M.D.
1874
Jones, L. W., M.D. . . . . . . . . . 1902
*Jordan, W. G., D.D., (Professor, Queen's University).. . . .. 1899
Joy, Sylvanus, M.D. . . . . . . . . . 1857
Joyce, C. E., B.A.... . . . . .... 1907
Joyner, Noble P., M.D.. .. .... 1893
Judson, George W., M.D
1879

Climax, Minn.
Montreal, Que.
(Deceased.)
Mountain.
Chicago, Ill.
Newark, N.J.
Chicago, Ill.
London.
London, Eng.
Orwell, P.E.I.
Torunto.
Campbell's Cross.
Thornhill, Ont.
Kingston.
Washington, N.J.
Vancouver, B.C.
(Deceased.)
(Deceased.)
(Deceased.)
Combermere.
Toronto East.
Hamilton.
Calabogie.
Toronto, Ont.
Drayton.
Ottawa.
Merrickville.
(Deceased).

Akron, Ohio.
Ottawa.
Marmora.
Kemptville.
Portland.
Kingston.
Tilsonburg.
Bronte.
(Deceased.)
Lyn.

## Date of

Name.
Graduation.
Address.
Judson, H. P., (Vice-Presidentand Head of Political ScienceDepartment) LL.D.

1903
Kahkewaquonaby, M.D ..... 1866
Kalbfleish, Frederick H., M.D... ..... 1888
*Kannawin, William M., B.A., 1896 ; B.D. ..... 1900
Karr, W. J., B.A. ..... 1906
Kay, William, M.A ..... 1855
Kayler, William B., M.D ..... 1896
Kean, S. G., M.D ..... 1907
Kearnes, D. A., M.D ..... 1903
Keeley, F. J., M.D ..... 1907
Keillor, James, B.A ..... 1900
Keith, G. C., B.Sc ..... 1907
Keith, Sylvanus, M.D ..... 1898
Kellock, David, M.D ..... 1899
Kellock, John D., M.D ..... 1862
5, 17*Kellock, John Mc., M.A. ..... 1892
Kellock, W. McC., B.A. ..... 1897
Kelly, David, M.D. ..... 1861
Kelly, Edward J., M.D. . ..... 1861
Kelly, John J., B.A., 1888; M.D. ..... 1892
*Kelly, T. Webster, B.A. ..... 1886
Kelly, W. G., M.D. ..... 1897
*Kemp Alexander F., LL.D. ..... 1871
Kemp, J. A., M.D. ..... 1861
Kemp, James A., M.D ..... 1892
3Kemp, W., B.A., 1898 ; M.A ..... 1899
Kennedy, Alexander, M.D ..... 1876
Kennedy, A. H., B.A ..... 1903
Kennedy, Alfred, M.A. ..... 1901
Kennedy, D. B., M.D. ..... 1903
Kennedy, Jacob B., M.D ..... 1873
Kennedy, Jennie M., B.A. ..... 1899
Kennedy, John D., B.A ..... 1885
Kennedy, John T., M.D ..... 1891
Kennedy, Roderick, M.D ..... 1863
Kennedy, T., M.A ..... 1899
Kennedy, T. B., M.D ..... 1873
Kennedy, W. A., B.A. ..... 1905
Kennedy, William B., M.D ..... 1878
Kerfoot, H. W., B.A ..... 1900
Kertland, Edwin H., M.D. ..... 1865
Keys, Samuel J., B.A ..... 1904

Chicago Univ., Ill.
Hagersville.
Neustadt.
Woodville.
Sarnia.
(Deceased.)
Toronto Jct.
Brookfield, Nfld.
Ottawa.
Railton.
Ridgetown.
Smith's Falls.
New Glasgow, N. S.
Harrisville, N.Y.
(Deceased.)
Riverfield, Que.
Weyburn, Sask.
(Deceased.)
(Deceased.)
Sydney, N. S. W.
Bay City, Mich.
(Deceased.)
(Deceased.)
Indian Head, N.W.T.
Kingston.
Port Arthur.
Harris Hall, Ann Arbor, Mich.
Prince Albert, Sask.
Pembroke.
New South Wales.
Guelph.
New Westminster,B.C.
Bath.
Jarvis St., C.I., Toronto.

Bardezag, Ismidt, Turkey in Asia.
Guelph.
Prescott.
Toronto.
Cornwall.
Date of
Name. Graduation. Address.
Keyes, Stanley J., M.D ..... 1905
New York.
Kidd, A. J., B.A. ..... 1905
*Kidd, C. E., B.A. ..... 1903
Kidd, Edward, M.D ..... 1871
Kidd, G. E., B.A. ..... 1906
24Kidd, John F., M.D. ..... 1883
Kidd, William E., M.D. ..... 1891
Kidd, William J., B.A. ..... 1887
*Kidd, W. J., B.A ..... 1903
*Kidd, P. E. ..... 1878
Kilborn, H. J., M.D. ..... 1899
8Kilborn, Omar L., B.A., 1888; M.A., 1889 ; M.D ..... 1889
Kilborn, Ronald, M.D ..... 1879
Kilburn, D. G., B.Sc. ..... 1907
Kilmer, E. E. C., B.A ..... 1904
Kincaid, Robert, M.D ..... 1868
Kinkead, E. C., M.D ..... 1904
King, Francis, B.A., 1889; M.A. ..... 1890
King, J. L., B.Sc. . ..... 1907
King, W. Wallace, M.A. ..... 1895
Kingsford, William, C.E., LL.D. ..... 1889
Kingsley, F., M.D. ..... 1905
Kingsley, Patrick J., M.D. ..... 1894
Kirk, Fred Jas., B.A., 1888 ; M.D. ..... 1802
Kirkconnell, Thomas A., B.A.. ..... 1894
Kirkland, W. S., M.A. ..... 1901
*Kirkpatrick, A. F., (Master of Selwyn Coll., Cambridge), D.D. ..... 1905
Kirkpatrick, Charles S., B.A. . . ..... 1893
*Kirkpatrick, Francis G., B.A... ..... 1891
Kirkpatrick, Hon. Geo. A., LL.D. ..... 1893
Kirkpatrick, Herbert R., B.A.... ..... 1895
Kirkpatrick, Gıy H., B.Sc., 1897 ; M.E. ..... 1898
Knapp, Albert E., B.A. ..... 1895
11bKnapp, E., M.A. ..... 1905
12Knight, Archibald P., (Profes- sor, Queen's Univ.) B.A., 1872; M.A ..... 1874
Knight, Cyril W., B.Sc. ..... 1903
Knight, John H., M.D. ..... 1880
Knight, A. S.. M.D ..... 1897
Knight, W., B.A. ..... 1905
*Knowles, Robert E., B.A ..... 1892
Knox, Henry, M.D. ..... 1882
(Deceased.)
Prospect.
Abbotsford, B.C.
Kingston.
Prospect.
Ottawa.
Oak Park, Ill.
Ottawa.
Rock Bay, B.C.
81 St. Mark's Ave.,Brooklyn, N.Y.
Oso.
Chentu, China.
Kingston.
Stratford.
Aylmer.
Olympia, Wash.
Kingston, Jamaica.
Kingston.
Fairfax, Man.
Teachers' College,New York.(Deceased.)
Wolfe Island.
404 Hamburg Ave.,Brooklyn, N.Y.
Port Hope H. D .
Toronto.
Cambridge, Eng.
Kingston.
Cardinal.
(Deceased.)
Montreal.
London, Eng.
Kingston.
Battersea.
Kingston.
Kingston.
Wallaceburg.
Enfield Centre, N. Y.
Belleville.
Galt.

Date of
Name.
Knox, W. J., M.D.
Koyle, Frederick T., M.D...... 1882
Koyl, Frank H., M.D. . . . . . . . . 1888
Kyle Robert J. M., M.D. . . . ... 1895
Kyle, William A., M.D. . . . .... 1885
Lafferty, James, M.D.
Lafferty, William A., M.D.. ... 1879
Laidlaw, Alexander R., M.D.. .. 1857
Laidlaw, C., B.A., 1902; M.D... 1907
Laidlaw, J. H., B.A., 1900; M.D. 1903
Laidlaw, R. J., B.A................ 1906
Laidley, W. G., M.D. . .. .. ... 1906
Laing, A., B.A. . . . . . . . . ... 1907
Laing, Maybelle, B.A. . . . . . ... 1904
Laird, Annie L., B.A. . . . . . ... 1901
Laird, D. H., M.A. . . . . . . . . . 1898
*Laird, Robert, M.A. . . . . . .. 1893
Lake, Charles B., M.D. . . . . . . . 1866
Lake, E. J., M.D. . . . . . . . . . . . . 1898
Lalonde, A. J., M.D.. . . . . . . . . 1904
Lambert, Robert, M.D. . . . . . . . 1859
Lamont, John, B.A... . . . . .... 1890
Lane, Isaac J., M.D. . . . . . .... 1886
Lane, Joseph W., M.D.. . . . . . . 1875
Lanfear, Henry O., M.D. . . . . . . 1889
*Lang, George R., B.A.. . . . . . . 1885
12*Lang, Wm. A., B.A., '73; M.A. 1876
14Langford, T. E., M.A. . . . ... 1898

- *Langill, Paul F., B.A.. ... .... 1881

Laurier, Sir Wilfrid, LL.D...... 1898
*Lavell, Alfred E., B.A.... . . .. 1892
Lavell, Cecil F., M.A.. . . . . . . 1894
Lavell, Charles H., M.D. . . . ... 1873
Lavell, Harry A., B.A. . . . . . ... . 1888
12Lavell, John R., B.A. . ... .. 1877
Lavell, Michael, M.D.. . . . . ... 1863
Lavell, William A., M.D. . . . .... 1881
Lavell, W. H., M.D................. . . . 1905
Lavers, Frank C., M.D. . . . . . . .. 1891
Lavoie, Ed., B.Sc. . . . . . . . . . . . 1907
Lawlor, C. A., M.D.... ..... ... 1906
Lawlor, Michael, M.D.. ... .. .. 1857
Lawlor, R. G., B.A.. . . .. . . . ... 1902
Lawyer, Annie, M.D. . . . . . . . . . . . . 1888
Lazier, D. B., M.D. . . . .. .. . .. 1901
Lazier, F. S., B.Sc. . . . . . . . . . . . 1907
Leach, G. C., M.D.
1904
Leahy, Bernard J., M.D
1894

Kelowna, B.C.
Fort Bliss, Texas.
Hornellsville, N.Y.
(Deceased.)
Ottawa.
Calgary, Alberta.
(Deceased.)
(Deceased.)
Georgetown.
Hamilton.
Georgetown.
Kingston.
Baltimore.
Kingston.
Portage La Prairie, Man.
Winnipeg, Man.
Kingston.
Ridgetown.
Kingston.
Port Neuf, Que.
Windsor.
North Williamsburg.
Mallorytown.
Olds, Alta.
(Deceased.)
Shelburne.
Varo.
Ottawa.
Waterloo.
Hartford, Conn.
(Deceased.)
Smith's Falls.
Strathcona, Alta.
(Deceased.)
(Deceased.)
Strathcona, Alta.
New Ross, N.S.
Baie St. Paul, Que.
(Deceased).
(Deceased.)
Sydenham.

## Ottawa.

Belleville.
Peterborough.
Point Jarvis, N.Y.
Date ofName. Graduation. Address.
Leask, Judge Harry, B.A ..... 1888
Leavitt, Arvin S., M.D ..... 1869
Leavitt, Minnie G., M.D ..... 1893
*Leckie, N. M., B.A., B.D ..... 1902
Lee, R. A., M.D. ..... 1904
Lee, S. G., B.A., (Prin. City Coll. ..... 1905
Lees, Richard, M.A. ..... 1891
Leitch, G. C., B.A ..... 1905
*Leitch, James A., B.A. ..... 1892
Lennox, J. S., B.Sc. . ..... 1906
Lent, Edwin J., M.D. ..... 1892
Leonard, A. H., M.D ..... 1903
Leonard, Raymond A., M.D ..... 1879
Lesses, M., M.D. ..... 1905
Le Sueur, W. D., LL.D ..... 1900
Letellier, A., M.D. ..... 1897
Lett, Ralph M., B.A. ..... 1889
Lewis, Frederick W., M.D. ..... 1878
*Lewis, Lewis, B.A. ..... 1881
Lewis, L. L., B.A. ..... 1900
Lewis, T. N., B.A. ..... 1900
Liebner, E. O., B.A. ..... 1902
Lindsay, C. V., M.A ..... 1900
*Lindsay, John, B.A., '52; M.A. ..... 1854
*Lindsay, M. A. F., B.A. ..... 1904
Lindsay, Muriel C., B.A. ..... 1905
*Lindsay Peter, B.A. ..... 1851
4*Linton, Adam, R., B.A., 1881;B.D.1885
Litchfield, John P., M.D ..... 1863
Little, William C., M.D ..... 1889
Livingston, C. W., B.A. ..... 1907
*Livingston, John, B.A.. ..... 1857
Livingstone, John S., M.D. ..... 1888
*Livingstone, Peter S., B.A ..... 1870
Livingstone, Marion (Gillen), M.D. ..... 1887
*Lochead, Jno. S., B.A., '61; M.A. ..... 1863
Locheed, Lachlin T., B.A. ..... 1888
Lochead, W. M., M.A. ..... 1898
Locke, John A., M.D. ..... 1893
Locke, M., M.D ..... 1905
Lockhart, Alfred J., M.D. ..... 1892
Lockhart, George D., M.D ..... 1890
Lockhart, Thomas J., M.A. ..... 1892
Lodge, W. L., B.Sc ..... 1903
Lofthouse, William O, R., M.D. ..... 1895

Date of
Name. Graduation. Address.

1, 18Logie, William A., B.A., '87; M.A., 1888 ; LL.B... .. ....

Longmore, H. B., B.A., 1898 ; M.D. ..... .. .... .. .... .. 1907

Longwell, A., B.A., 1900 ; B.Sc. . 1903
Losee, J. R., B.A................... . 1906
Loucks, J. E., B.A.
Loudon, James, President of University College), LL.D..
*Love, Andrew T., B.A.. .. ... 1878 Low, Constance M., B.A. Lowe, F. E., M.D. . . . . . . . .. 1906
Lowe, George R., B.A. . . . . . . . 1895
Lowe, W. D., M.A
1902
*Low, G. J., D.D
Lowry, Blanche T., B.A. (Dolan) 1903
Lucas, S. L., M.D. . . . . . .... 1906
Lunam, Henry, B.A. . . . . . . ... 1877
Lyle, William D., M.D. . . . . . . . 1896
Lynch, Dennis P., M.D. . . . . . . 1878
Lynd, L. E., B.A. . . . .... .... 1907
Lyon, Horatio V., B.A. . . . . . . . 1885
Mabee, C. O., M.D. . . . . . . . . . 1888
Mabee, James E., M.D. . . . . . . 1887
Mabee, Horace C., B.Sc. . . . . . . 1898
Machar, John M., B.A. . . . .... 1857
Madden, John H., B.A. . . . .... 1889
Mahaffy, A., B.D. ................. 1905
Mahaffy, F. W., B.A. . ....... . 1903
Mahood, A. E., B.A., 1904 ; M.D. ... 1905
Mahood, Perry, B.A.. . . . . .... 1889
Mair, Alexander, B.A. ............ 1851
Malcolm, George, B.A. . . . . .. 1894
8Malcolm, L. M., M.A., 1905 ; B.Sc.

Malcolm, William G., M.D. . ... 1893
28, 9,14 Malcolm, Wyatt, M.A. ... 1906
Malloch, Archibald E., M.D., B.A 1862
Malloch, Edward G., B.A.
Malloch, Eleanor E., B.A., (Calvin)
Malloch, George, B.A. . . . . .. 1865
Malloch, G. S., B.A., 1902; B.Sc.. 1906
Malloch, George W., B.A.. .. .. 1850
Mallory, Charley N., M.D... ... 1888
Malone, Edith, B.A., 1899 ; M.A. 1900
Malone, E. E., B.Sc. . . . . ..... 1904
Malone, Herb. V., B.A., '94; M.D. 1898

Hamilton.
Camden East.
Cobalt.
Collins' Bay.
Frankville.
Toronto.
Quebec.
Ottawa.
Adelphi, Jamaica.
Ottawa.
Ottawa.
(Deceased).
Berlin.
Kingston, Jamaica.
Campbellton, N. B.
Havana, North Dak.
Almonte.
Fennells.
Kingston.
Odessa.
Detroit, Mich.
(Deceased.)
E. C. S. Bank Bldg., Buffalo, N.Y.
Port Elgin.
Alvinston.
Erie, Pa.
Kingston.
Stratford.
Stratford.
Chesley.
Woodstock, Ont.
Hamilton.
Perth.
Quebec.
Arnprior.
Hamilton.
(Deceased.)
Delta.
Kingston.
Frankford.

Date of
Name.
Mann, Alexander, D.D. . . . . . 1876
*Mann, James, M.D. . . . . . ... 1869
Mark, Robert, M.D. . . . . . . . . . . 1867
Markle, J. H., B.A. . . . . . .... 1902
Marquis, Thomas G., B.A. . .... 1889
Marselis, Eathen H., M.D. . . . . 1895
*Marshall, D. H. J., B.A.
1904
4, 13Marshall, Jno., B.A., 1886; M.A., Asst. Prof. of English, Queen's University

1889
Marshall, J. W., B.A. . . . . . . . 1898
Marshall, W. F., M.A. . . . . . . . 1898
3Marty, Alletta E., M.A. . . . ... 1894
3. 4Marty, Sophia E., M.A...... 1897

Mason, G. W., M.A.. . . . . .... 1902
Mason, JamesW., B.A. . . . . . . . 1878
Mason, W. R., M.D. . . . . . .... 1901
Massie, Agnes M., (Cooper) B.A 1895
Massie, John, M.D.. .. . . . . .. 1865
Masson, Thomas, M.D..... .... 1875
Mather, William M., M.D... . . . 1886
Mather, J. F., M.D. . . . . . . . . . 1898
Matheson, H،, B.Sc. . .... .. .. 1907
8Matheson, John, Assistant Professor in Mathematics, Queen's University) M.A.
Matheson, M., B.A. . . . . . . . . 1907
Matheson, Murdoch, M.D. . . . . 1870
8Matthews, S. W., M.A... .. . . 1897
Mattice, William D., B.A... ... 1847
Maudson, William H., B.A. . .. 1896
Maudson, G. A., B.A.. ... .. .. 1898
Mavety, Alexander C., M.D..... 1889
Maxwell, William J., M.D. . ... 1888
25, 5 May, H. P., B.A., 1905; M.A. 1906
*May, John, B.A., 1857; M.A... 1861
Maybee, Curtis O., M.D. . ... .. 1888
Maybee, Millard, M.D. . .. .... 1887
Meacham, George P., M.D. . ... 1891
Meade, Robert, M.A.. .. .. ... 1897
Meadows, R. W., M.D. . . . .... 1862
Meagher, Daniel, M.D. . .. .. .. 1867
Meek, C. F., M.D. . . . . . . . . . 1900
*Meikle, William, B.A.. .. .... 1881
Meiklejohn, A. J., B.A. . . . . ... 1898
Meldrum, G. E., B.A............... 1906
Mellon, P. B., M.D. . . . . . . . . 1901

Kingston.
Welland.
Brooklyn, N.Y.
176 McLaren St.,
Ottawa.
Stratford.
Toronto.
(Deceased.)
Campden.
Toronto.
(Deceased.)
Cape Vincent.
Tweed.
Belleville.
Armow.

Kingston.
Armow.
Waverly, N.S.W.
Vancouver Coll., Vancouver, B.C.
(Deceased.)
(Deceased.)
(Deceased.)
Toronto Jct.
(Deceased.)
Brockville.
Franktown.
New Providence, Io.
Riverside. Cal.
Eldria, Pa.
Windsor.
H. M. Service.

Montreal.
New Baltimore, Mich.
Toronto.
Ottawa.
Hull, Que.
Queen St., Ottawa.

Date of
Name.
Mellow, F. E., M.D.
Mellow, Samuel J., M.D.. .. .. 1886
Melleville, Edmond J., M.D..... 1892
Menish, Janet I.,(Kannawin) B.A 1895
Menzies, R. D., B.A., 1895 ; M.A., 1896; M.D.. . . . . . . . . . . 1899
Mercer, John G., M.D. .. . ... .. 1855
Merrill, J. Ward, B.A., '99; M.D. 1902
Merriman, Wellington H., M.D. 1895
Merritt, C. P., B.Sc. . .. .. .... 1899
Metcalfe, Archibald A., M.D.... 1896
Michell, Kathleen M., B.A... .. 1905
Might, L., M.A. . . . . . . . . . . . . 1904
*Millar, J. F., B.A. . . . . . . . . . . 1899
Millar, T. R., B.Sc.................. 1906
Miller, Cora, M.A. . . . . . . . . . . . . . 1906
Miller, Eva M., B.A. . . . . . . . . . 1902
Miller, F., B.A.. ..... . . . . .... 1904
Miller, James D., B.A.. . . . . . . . . 1896
*Miller, J. H., B.A. . . . . . . . .. . 1904
*Miller, James L., B.A.. .. .... 1896
*4Miller, John M., B.A., 1890; M.A., 1891; B.D. ............. 1905

Miller, John, B.A.. . . . . . ... 1886
Miller, John C. S., M.D. . . . . . . 1890
Miller, Lindsay F., M.D. . . . . . . 1877
Miller, Thomas, B.A.. ....... 1852
Miller, Thomas, B.A., M.D. . .. 1854
*Milligan, G. M., (D.D.), B.A., 1862; LL.D. . . . .. . . .. ... 1903
Milliken, J. B., B.A................ . 1907
Milliner, William S., M.D. . .... 1864
Millions, Edna M., (Conn) B.A... 1901
Mills, Hon. David, LL.D. . . . . . 1901
Mills, Frances B., B.A. . . . . . . . 1907
Mills, Rhoda, B.A. . . . . . . ... 1898
Mills, R. M., M.D. . . . . . . . .... 1907
*Mills, Rt. Rev. Bishop, LL.D.. 1901
Mills, John H.. B.A., 1889 ; M.A. 1890
Mills, Mabel V.. B.A. . . . . . ... 1901
Mills, Martha C., B.A. . . . . . .. 1896
*Mills, William G., B.A. . ... .. 1885
*Milne, James W. H., B.A. . ... 1887
Milne, M. R., B.A.. . . .. . . . . 1903
3Minnes, Robert S., B.A., 1889;
M.A., 1890; M.D. . . . . . . 1893
Minor, Silas, M.A. . . . . . . . . 1865

1. 2Misener, Geneva, M. A. . .... 1899

Sillsville.
Port Perry, Ont.
Bakersville, Vt.
Woodville.
Rosemeath.
(Deceased.)
Chapleau.
Latimer.
(Deceased.)
Almonte.
Perth.
Kingston.
Blakeney.
Kingston.
Aylmer, Ont.
Woodstock C. I.
Avening.
Field, B. C.
Byng Inlet.
Nanaimo, B.C.
(Deceased.)
Seattle, Wash.
Toronto.
(Deceased.)
Hamilton.
Toronto.
Strathroy.
(Deceased.)
Napanee.
(Deceased.)
Kingston.
Cataraqui.
Kingston.
Kingston.
Torunto.
Kingston.
Oshawa.
California.
Ottawa.
Kingston.
Metcalfe St., Ottawa.
(Deceased.)
Niagara Falls.

Date of
Name.
Mitchell, Charles F., M.D. . .... 1890
Mitchell, Elizabeth, M.D. . . . .. 1888
Mitchell, G. A., B.A. . . . . . . . . 1839
2Mitchell, Geo. W., B.A., 1885 ; M.A., Assist. Prof. Greek and Latin, Queen's University
Mitchell, Harry F., M.D. . . . . 1891 1889
Mitchell, J., M.D. 1899
Mitchell, Joel W., B.A... .. ... 1894
8Mitchell, Alfred S., M.A., (Professor Columbia University)

1894
Mitchell, J. V., B.A. . . . . . ... 1903
Moffat, Wm., M.A., 1894; M.D. 1898
Moffat, W. J., B.A................ 1905
Montgomery, Fannie L., B.A.... 1904
Montgomery, I. A., B.A........... . 1906
Montgomery, O. M., B.Sc. . ... 1905
Montgomery, W. H., B.A... .. 1905
Mooers, Henry F., B.A. . .. ... 1895
Mooney, Thomas T., M.D.. .... 1896
Moore, Andrew, M.D. . . . . . .. 1863
Moore, H. M., M.D. . . . . . . ... 1903
*Moore, John, B.A. . . . . . . . . . 1881
Moore, John, M.D. . . . . . . . . . . 1891
11Moore, Jas. R., B.A., '94; M.A. 1896
Moore, Margret B., B.A. . . . . . . 1904
Moore, R. G., M.D. . . . . . . . . . 1902
Moore, Thomas A., M.D.. .. .. 1883
Moore, Vincent H., M.D., 1870; LL.D

1903
Morden, Frederick W., M.D.. . 1894
Morden, Gilbert W., B.A., 1888; M.A.

Morden, James B., M.D. . . . . . 1865
Morden, John H., M.D... . . ... 1859
Morden, Wilson S., B.A., 1888; LL.B
Morden, J., B.A. . .. .. . . .. .. .. 1900
Mordy, Alfred A., M.D. . ... .. 1882
*Mordy, John, B.A., 1875; M.A. 1878
Morgan, Edward M., M.D. . ... 1890
Morgan, J., B.A. . .. .. .. .. .. 1900
Morris, Alexander C., B.A.. ... 1882
Morris, William, B.A.. .. . . .. 1882
Morrison, A. S., B.A. . . . ... . . 1898
Morrison, C. A. O., M.D. . . . . . 1898
*Morison, D. W., D.D. . . . . . .. 1903

Kingston.
South Bend, Ind. Gladstone, Mich.
Kingston.
New York.
Toronto.
Utica, N.Y.
Seaforth.
Montreal.
Pleasant Vallev.
Pittsburg, Pa.
Newton Falls.
Kingston.
Rochester, N. Y.
(Deceased.)
Athens.
Springbrooke.
Shannonville.
Toronto.
Wetaskawin, Alta.
New York.
Westville, N.S.
(Deceased.)
(Deceased.)
Picton.
(Deceased.)
(Deceased.)
Belleville.
Kingston.
(Deceased.)
Oklahoma.
Westmount, Que.
Toronto.
Toronto.
Barrie.
Kingston.
Ormstown, Que.

Date of
Name.
Graduation. Address.

| *Morrison, Judge Duncan, 1866; M.A. | 1868 | Picton. |
| :---: | :---: | :---: |
| Morrison, Duncan | 1862 | (Deceased). |
| 8Mortin, Alice, (Byrnes) | 1899 | Cobalt. |
| Mostyn, William, M.D. | 1858 | (Deceased.) |
| Mowat, Herbert M., B.A., 1881 LL.B. | 1886 | Toronto. |
| *Mowat, John B., D.D., B.A. <br> 1845 : M. A. | 8 | (Deceased.) |

Mowat, John McD., B.A.. .. .. 1895 Kingston.
Mowat, Sir Oliver, LL.D
1872 (Deceased.)
Moxley, C. R., M.D
1905 Kingston.
Muckleston, John S., B.A.. .... 1865 Calgary, Alta.
5Mudie, Ethel, B.A.. ... .. .... 1899 Kingston.
Mudie, John, B.A. . . . . .. ... 1863
Muir, Alexander, B.A. . . . .. .. 1851
Muir, James, B.A. . . . . . . . . . . . 1861
*Muir, Jas. B., B.A., 1865 ; M.A. 1869
*Muir, James C., D.D. . . . . . . 1858
*Muir, Peter D., B.A. . . . . . . . . 1856
*Muirhead, John W., B.A.. .... 1891
Muldrew, William H., B.A... .. 1895
Mullan, Nathaniel S., B.A. . .... 1885
Mulloy, L. W., B.A.
1906 Winchester.
Mundell, Alma E., B.A. (Cliffe) 1902 Mortlach, Alta.
Mundell, David E., (Prof., Queen's Univ.) B.A., 1883; M.D.....
Mundell, John, M.D.. .. .. .... 1886
Mundell, William, B.A.
Muncll,
1904
Munro, David, M.D.. . . . . .... 1867
Munro, John C., M.D. . . . . . . . 1867
*Munro, J., B.A.. . . . . . . . . . . 1897
Munro, H. B., B.A.
1898
Munro, Maggie B., B.A. . ... .. 1905
Munro, Maud E., B.A........ 1899
${ }^{*}$ Munro, M. F., B.A., 1904; B.D. ..
1, 2, 18 Munro, P. F., B.A., 1899; M.A.

1907
(Deceased.)
(Deceased.)
Guelph.
(Deceased.)
(Deceased.)
(Deceased.)
(Deceased.)
(Deceased.)
New York.

Kingston.
Kingston.
Kingston.
Moose Creek.
Perth.
(Deceased.)
Los Angeles, Cal.
Lynn, Mass.
Iroquois.
Perth.
Lancaster.
1905 Toronto.
5, 25 Munro, William B., (Prof., Harvard University) M.A., 1896 ; LL.B
Munro, W. A., B.A. . . . . . . . .... 1902
25 Murphy, G. B.. B.A
1904
5 Murphy, Isabella, M.A. (Skelton)
Murphy, John B., M.D.. . . . . . 1876
Murphy, Joseph E.. M.D
1893
Cambridge, Mass.
Edmonton, Alta.
Brockville.
Kingston.
(Deceased.)
Pakenham.
Date of
Name.
Murphy, W. S., B.A., 1901; M.D. 1903 Portland.
Murray, C. W., B.Sc. . . . . . . . 1907 Cobalt.
11Murray, D. C., M.A. ..... 1901 Newton.
Murray, Herbert G., M.D ..... 1896
*Murray, Isaac, D.D ..... 1876 (Deceased).
*Murray, James, B.A., 1882 ; B.D. 1884 Toronto.
Murray, Janet, M.D ..... 1891
Murray, J. C., B.Sc. ..... 1901
*Murray, Robert C., B.A.oronto.
Murray, Minnie (Chown), M.A. ..... 1893
Murray, May L., B.A.
Murray, Walter C., (Professor ofPhilosophy, Dalhousie Col-lege and University) LL.D..1903
Myers, Ambrose R., M.D.1894
Mylks, G. W., M.D. ..... 1897
Mylks, L. E., M.D.
Macadam, Samuel J., M.D ..... 18731903*Macalister, John M., B.A.. ...Macalister, Ursilla, M.A. (Mac-donnell)
1865 Russeltown, Que.
1897 Kingston.
Macarthur, Annie M., B.A. ..... 19071900 Vernon, B.C.
Macarthur, Duncan, B.A. ..... 1878
*Macarthur, George, B.A. ..... 1881

Macarthur, James, B.A., 1875 ;

Macarthur, James, B.A., 1875 ;M.D.
*Macarthur, John A., B.A........ 1880
7, 25 McArthur, D. A., B.A. ..... 1907
McArthur, F., B.Sc.McArthur, J. H., B.A., 1895 ; M.D1907
1897
McAskile, J., B.A. ..... 1907.
*McAuley, Alexander, B.A. ..... 1883
*Macauley, Evan, B.A. ..... 1864
Macauley, W. B. T., B.A.
McBain, Alex., B.A., 1860 ; M.A. ..... 1892 ..... 1862
McBean, Alexander G., B.A. . . . ..... 1865
McBean, D. D., LL.D ..... 1905
McBroom, James A., M.D.. ... ..... 1895
McCabe, A., M.D. ..... 1903
McCaig, James, B.A., LL.B. ..... 1895
1878 London.
Ential, Wash.
Dutton.
Asst. Engr., Guelph.
East Barre, Vt.
Highgate.
Ladner, B.C.
(Deceased).
Montreal.
(Deceased.)
Lancaster.
New York City.
Brockville.
Gloucester, Mass.
Lethbridge, Alta.
7 McCallum , Judge Archibald B.,B.A., 1880 ; M.A.
McCallum, H. E., B. A., 1900;1881 Gore Bay.
B.Sc. .
$\mathrm{McCallum}, \mathrm{J}. \mathrm{A.}, \mathrm{B.A}$. ..... 1903 ..... 1899
McCallum, J. F., B.A.
9McCallum, S., M.A., 1904 ; M.D. ..... 1906
McCambridge, C. J., M.D. ..... 1898
Kingston.
Brewer's Mills.
Brooklyn, N.Y.

Date of
Name.
Graduation. Address.
McCammon, C. G., M.D... ..... 1884 (Deceased.)

McCammon, Fred J., B.A., 1889; M.D. . . . . . . . . . . . . .

1892 Brooklyn, N.Y.
McCammon, James, M.D...... 1863 (Deceased.)
McCammon, James A., M.D.... 1879 Gananoque.
McCammon, Samuel H., M.D... 1888 Coalinga, Cal.
*McCannell, Donald, B.A. . . . . . 1878 (Deceased.)
McCardel, Edward, M.D.
1886
McCarthey, A. W., M.D
1897 Kingston.
McCarthy, D. M., M.D
1903 Prescott.
*McCaul, James, B.A. .
1859 (Deceased).
11 McClement William T., B.A, 1888; M.A., Prof. Queen's University

1889 Kingston.
McColl, Angus, D.D.. ....... 1896 (Deceased.)
McColl, Allan E., B.A., '85; M.D. 1891 Belleville. *McColl, Evan C. W., B.A. . .. 1886
7 McColl, James A., M.A.

## 1885

6, 17, 25 McConachie, J. C., B.A., 1903 ; B.D., 1905 ; M.A.

1895
Campbellford.

McConkey, Katherine M. R., B.A. McConnell, Benjamin J., M.D... *McConnell, J. A., B.A., 1900; B.D.

1906 Alymer.
1903 Brockville.
1881 Morden, Man.

McConville, A., M.D... ... . . .. 1900
McCormack, Joseph, B.A.. .. .. 1879
McCormack, M., B.A.. . . .. .. 1901
McCormack, S. G., M.A... . . .. 1903
McConville, Isobel, M.D.. .. .. 1889
McCormick, Albert M., M.D. . . . 1907
McCormick, J. B., M.D.. ..... 1906
McCormick, Irene M, B.A.
McCracken, John I., B.A.
194
McCrieken, John I., B.A... .... 1874
McCrea, H. H., M.D.
1900 Reynolds, Tnd.
McCreary, Robert N., M.A. ....
1899 West Leyden, N.Y.
McCrimmon, Annie L., B.A., (Purvis)

1895 Carleton Place.
McCrimmon, J. R., B. $\dot{\text { B. ............... } 1902} 1906$
McCuaig, H. D., B.A.
106 Montreal, Que.
McCuaig, Herbert M., B.A
McCuaig. John A. E., M.D
1884 Dalston.
M.

McCullagh, R. J., B.A.. . . . . : 1902 Cobourg.
McCulloch, Andrew, B.A., 1871; M.A.

McCulloch, I.. M. M
McCulloch, $\mathbb{R}$.
1874 Port Arthur.
1901 Port Perry.
1907 Cobalt.

Date of
Name.
McCullough, F. C., M.D. . . . . 1904
McCullough, Thomas P., M.D.. 1888
McCullough, William S., M.D... 1875
McCutcheon, J. M., B.A. . . .. 1905
McCutcheon, William C., M.D. . 1894
McDermott, M. F., M.D.. . . . . 1897
McDiarmid, S. S. R., B.Sc. . ... 1903
Macdonald, A., M.D. . .. .. ... 1901
*Macdonald, Alexander, B.A.... 1861
Macdonald, Alexander R., M.D. 1857
McDonald, Angus, M.D.. . . . . 1907
McDonald, A. T., M.D... . . ... 1903
McDonald, Charles, V.P.A.S.E., LL.D.

1894
*Macdonald, Clinton D., B.A.... 1886
Macdonald, Colin, B.A.. .. .... 1855
*Macdonald, Donald, B.A.. .... 1854
*Macdonald, Duncan, B.A., 1859 ; M.A.

McDonald, D. J., M.D.
4 Macdonald, George, B.A., 1878 ; B.Sc.

1863

McDonald $\because$. 180
Macdonald, Herbert S. Judge, B.A., 1859; M.A.

1906
1878

Macdonald, Hugh N., M.D. .... 1882
McDonald, Hugh S., B.A., 1891; M.D.

1895
Macdonald, $\dot{J}, \ddot{B} . \ddot{A} .$.
7, 25Macdonald, J. F., M.A. . ... 1899
2MacDonald, Jas., M.A.... .... 1892
*McDonald, John A., B.A..... 1888
Macdonald, Sir John A., LL.D.. 1863
Macdonald, John A., M.D. . .... 1862
Macdonald, John F., M.D. . . .. 1896
*McDonald, J. M., B.A............ 1903
*Macdonald, Kenneth J., B.A., 1894; B.D. . .. .. .. .. ....
Macdonald, Nerva D. (Burns), B.A. . . . . .. .. .. .. .... 1894

Macdonald, Norval, B.A.. .. ... 1900
Macdonald, Patrick A., B.A. . .. 1876
4McDonald, R. J., M.A. . . . . 1907
*McDonald, Wm., B.A., ;98; B.D 1901
Macdonnell, Æneas J., B.A..... 1884
*Macdonnell, Daniel J., B.D., B.A., 1858; M.A. . .. ..... 1860

1, 2Macdonnell, George F., M.A. 1893 Toronto.

| -299- |  |  |
| :---: | :---: | :---: |
| Name. G | Date of Graduation | n. Address. |
| Macdonnell, George M., B.A. | 1860 | Kingston. |
| McDonnell, Hector, M.D | 1893 | (Deceased.) |
| Macdonnell, J. As, M.D. . . | 1862 |  |
| 2Macdonnell, James M., M.A | 1905 | Balliol Coll., Oxford. |
| *Macdonnell, Logie M., B.A. 1902; M.A..... .. .. .. | .., 1904 | Vernon, B.C. |
| 19Macdornnell, James S., M.A... | .. 1899 | Pasadena, Cal. |
| Macdonnell, John M., B.A. | 1868 | (Deceased.) |
| McDonnell, J. J., M.D. | 1903 | Edmonton, Alta. |
| McDougald, W. L., M.D. | 1907 | Cornwall. |
| McDougall, Colin A., B.A. | 1895 | St. Thomas. |
| 9McDougall, F. H., B.A., 1902; |  | Maxville. |
| McDougall ${ }^{\text {Mames }}$ | 1896 |  |
| 6McDougall, L. M., M.A. | 1905 | Brockville. |
| McDowell, Charles, B.A. | 1877 | Renfrew. |
| McDowell, James A., B.A | 1867 | (Deceased.) |
| McDowall, J. L., M.D | 1903 | Kingston. |
| MacEachern, E. G. D. | 1905 | Regina, Sask. |
| McEachern, J. G., B.A. | 1907 | Stayner. |
| 6McEachran, J. M., M. A., 1902 Ph. D. | . 1906 | Leipsig, Germany. |
| McEachran, Mary, B.A. | 1906 | Strathburn, Ont. |
| McEwen, Alexander D., M.D | 1895 | Hulbert. |
| McEwen, D. F., B.Sc. | 1907 | Cobalt. |
| McEwen, Ewen, M.D. | 188\% |  |
| McEwen, G. G., M.A. | 1903 | Lakeport. |
| *McEwen, Jas., B.A., '52 ; M.A. | 1854 |  |
| McEwen, John, B.A. | 1887 | Smith's Falls. |
| McEwen, J. S., B.A. | 1897 | Ottawa. |
| McFadden, Murdock, M.D. | 1880 | Mount Forest. |
| *Macfarland, John F., B.A. | 1890 | Warkworth. |
| Macfarlane, Andrew K. H., B.A | A. 1888 | Vancouver, B.C. |
| Macfarlane, Annie S., B.A. | 1907 | Franktown. |
| Macfarlane, Christina S, B.A | 1906 | Franktown, Ont. |
| 7 McGaughey , G. A., M.A. | 1900 | North Bay. |
| McGhie, George S., M.D. | 1883 | Elgin. |
| McGibbon, A. A., M.A. | 1898 | Hawkesbury. |
| *Macgillivray, Alexander, | 1858 | (Deceased.) |
| 8McGillivray, Alice, M.D. . | 1884 | Hamilton. |
| *McGillivray, Daniel, B.A. | 1864 | Lunenberg, N. S. |
| McGillivray, Farquhar, B.A. | 1852 | (Deceased). |
| Macgillivray, Florence, B.A. | 1905 | Kingston. |
| *Macgillivray, Malcolm, B.A., '72 M.A., 1874 ; D.D. . | 2; 1903 | Kingston. |
| McGillivray, Neil J., B.A. | 1847 | (Deceased.) |
| Macgillivray, T. D., B.A., 1902 M.D | 2; 1905 | Kingston. |
| McGillivray, T. Shannon, M.D. | . . 1888 | Hamilton. |

Date of
Name.
McGillivray, Wm., B.A. . . . ... 1864
McGlennon, A. C., B.A. ... ... 1907
McGonigle, M., M.D. . . . . . . . . 1904
McGrath, Edward, M.D. . . . . . . 1888
McGrath, George, M.D... . . . . . 1893
McGrath, Michael E., M.D. . ... 1889
McGreer, C. G., B.A., 1901; M.D. 1903
Macgregor, Annie K., B.A.... 1905
McGregor, D. A., B.A.. . . .... 1905
Macgregor, Grace C., B.A. . ... 1905
McGregor, James G., M.D. . . . . . 1895
McGregor, Peter C., B.A., 1866; LL.D. . . . . . . . . . . . . . . . 1901
*McGregor, P. G., D.D. . . . .... 1876
McGuire, J., M.A. . . . . . . . . . . . 1902
12McGuire, Thos. H., B.A., Judge 1870
23McGuirl, Thomas H., B.A.... 1886
McGurn, Joseph S., M.D... .... 1881
MacIlquham, W. L., B.Sc.... .. 1905
*McIlroy, William A., B.A. . ... 1898
MacInnes, John A., B.A. . . . . . . 1895
MacInnes, Charles R., M.A. . ... 1896
*MacInnes, W. H., B.A., 1902; B.D

McIntosh, Alexander, B.A. . . . 1897
McIntosh, Colin, B.C.L., LL.B. . 1896
McIntosh, Grace A., B.A. . .... 1896
McIntosh, G. E., M.D. . . . . . . . 1903
3*McIntosh, James W., B.A., '93; M.A.

McIntosh, Wm. D., B.A. . .. ... 1892
*McIntosh, J. A., B.A.
McIntosh, P. A., B.A., 1902; M.D

1905
McIntyre, Alex., B.A... . . . . . 1898
Macintyre, A. D., M.D.
12McIntyre, Donald M., B.A.... 1874
McIntyre, D. N., B.A. . . . . . . . 1903
McIntyre, Duncan, M.D.. .. . . 1864
MacIntyre, J. M.. B.A. . . . . . . . 1903
McIntyre, John, B.A. . . . . . . . 1847
McIntyre, John, B.A., 1861 ; M.A. 1872
*MrIntyre, W. C.. B.A. . . . . . . . 1898
McJanet, J., B.A. . . . . . . . . . . 1900
McKay, D. A., R.A. . . . . . . . . . 1901
McKay, Donald G., B.A. . . . ... 1865
McKay, G. J., B.Sc. . . . . . . . . . 1907

Colbor've.
Newboro.
Peterboro.
Hamilton, Mon.
Chicago.
Napanee.
Almonte.
Toronto.
Iroquois.
Martintown.
Almonte.
(Deceased.)
Almonte H. S.
(Deceased.)
Dom. Topog. Survey Dept., Ottawa.
Ottawa.
Vankleek Hill.
Princeton Univ.
Vankleek Hill.
Alexandria.
Carleton Place.
Lindsay.
Mississippi.
Mitchell.
Carleton Place.
Minden.
Dundela.
Winnipeg.
Kingston.
Kingston.
Victoria, B.C.
(Deceased).
Phoenix, Ariz.
(Deceased.)
Kingston.
Ottawa.
Scienće Master, Barrie C. I.
(Deceased.)
Owen Sound.

| Name. G | Date of Graduation |  |
| :---: | :---: | :---: |
| *McKay, George L., D.D. | 1880 | (Deceased.) |
| McKay, John, B.A | 1888 | Sault Ste. Marie. |
| MacKay, J. M., B.A. | 1905 | Kintore. |
| 12, 20 McKay , Matthew W., B.A. | . 1879 | Pembroke. |
| MacKay, Minnie B., B.A... | 1907 | Smith's Falls. |
| McKay, R. B., B.Sc. . | 1904 | Assayer, Slocan, B.C. |
| *McKay, Roderick, B.A., 1881; B.D. | ; 1886 | Maxville. |
| *McKay, William E., B.A. | 1856 | (Deceased.) |
| 8McKechnie, J. B., M.A | 1903 | Toronto. |
| 8 McKechnie , J. H., В.А., 1901 M.A. | ; 1902 | Toronto. |
| McKechnie, W., M.D | 1902 | Elmside, Que. |
| McKee, M. Lillian, B.A | 1900 | Peterboro. |
| *McKee, William, B.A. | 1872 | Alliston. |
| McKellar, Dugald, M.D | 1855 | (Deceased.) |
| McKellar, Kate, B.A | 1904 | Hamilton. |
| McKellar, Margaret, M | 1890 | Neemuch, India. |
| McKenley, A. G., M.D. | 1906 | Chapelton, Jamaica. |
| McKenty, James, M.D | 1890 | Winnipeg. |
| McKenzie, Andrew, M.D | 1862 | (Deceased.) |
| *McKenzie, Archibald, B. A., '88 B.D. | . 1892 | Douglas. |
| *Mackenzie, Archibald A., B.A., |  |  |
| '77; B.Sc., '77; M.A., '88 D.Sc. | ; 1896 |  |
| McKenzie, Edward, M. | 1860 | Smith's Falls. |
| MacKenzie, G. C., B.Sc. | 1903 | Brantford. |
| Mackenzie, H. A., B.Sc. | 1907 | Moulinette. |
| McKenzie, H. Maude, B.A. | 1906 | Gananoque. |
| McKenzie, John A., Judge, B.A. | . 1856 | (Deceased.) |
| 4McKenzie, Malcolm, B.A., '87; |  |  |
| M.A.. ${ }_{\text {cenzie, }}$ D. A.. ${ }^{\text {B }}$ | 1894 | McLeod, Alta. |
| *McKenzie, D. A., B.A. <br> McKeown, Henry A., M.D | $\begin{aligned} & 1898 \\ & 1895 \end{aligned}$ | South Monaghan. Belleville: |
| *McKeracher, D. A., B.A. | 1903 | Lynedoch. |
| McKeracher, Donalda M., B.A. | . 1907 | Dutton. |
| *Mackerras, John H., B.A., 1850 | ; 1852 |  |
|  | 1903 | Sierra Madre, Cal. |
| Mackie, David H., M.D | 1884 | New York. |
| Mackie, F. H., B.Sc. . | 1903 | Ottawa. |
| *Mackie, John, D.D | 1903 | Kingston. |
| Mackie, T. A., M.D. | 1896 | Kemptville. |
| McKillop, Alexander, B. ${ }_{\text {A }}$ | 1877 | Montreal. |
| *McKillop, Charles, B.A. | 1875 | Raymond, N. W. T. |
| McKillop, James T., M.D. | 1889 | (Deceased.) |

Name.
McKinley, W. W., M.D
*McKinnon, Alex. D., B.A., 1894; B.D
*MacKinnon, A. G., B.A.
MacKinnon, D. L., M.D.
MacKinnon, G. W., B.A.
*MacKinnon, H. L., B.A., 1897; B.D
*McKinnon, John, B.A., 1886; M.A., 1889; B.D.
*McKinnon, John, B.A., '94; B.D
*McKinnon, Malcolm, B.A.
6*Mackinnon, M. A., B.A., '97; M.A.

Mackintosh, Helen, M.A. .. .. 1907
*MacLachlan, Alexander, B.A... 1884
Maclachlan, A. J., M.D............ 1905
McLaren, Alexander, M. D. . ... 1865
McLaren, A. F., M.D. . . . . . . .. 1897
Maclaren, C. H., B.A. . . . . . .. 1902
*McLaren, Ebenezer D., B.A., '70; M.A., 1873 ; B.D., 1873 ; D.D.

McLaren, G. R., B.Sc.
McLaren, James, B.A.
McLaren, John, B.A.
$12 \mathrm{McLaren}, \mathrm{J} . \mathrm{B} .$, B.A., '76; M.A.
McLaren, Peter, B.A., 1854 ; LL.D.
McLaren, Peter, B.A.
McLaren, T. C., M.D.
McLaren, T. O., M.D.
*McLaren, Wm., (Prof., Knox College), D.D.
7*McLaren, W. W., M.A., 1899 ; B.D

McLaughlin, Edward, M.D... .. 1886
*McLean, A., D.D. .
*McLean, Alexander, B.A..
McLean, Allan Ed., B.A.
MLen, C.... 1899
McLean, Caird R., M.D. . .. ... 1859
Maclean, Donald, M.D., LL.D...
*McLean, Donald J., B.A. . . . . .
McLean, Ernest H., M.D. . ....
*McLean James M B A .... 1887
McLean, James R., B.A.
McLean, Katherine G., B.A. . . . 1896
MacLean, Lauchlin H., B.A.. .. 1894
McLean, Marion, B.A.

1901

1902 1878

1893
1855
1891
1887
1894

1906

1903 Port Hope.
1897 Boston, Mass.
1900 Basswood, Man.
1905 Lake Ainslie, N.S.
1907 Revelstoke, B.C.
1900 Sidney Mines, C.B.
1889 Pinkerton.
1897 Louisburg, C.B.
1885 Woodbridge.
1900 Halifax.
Madoc.
Smyrna, Turkey.
Glencoe.
Lancaster.
Cornwall.
Ottawa.
Toronto.
Cobalt.
Nelson, O.
(Deceased.)
Winnipeg, Man.
(Deceased.)
Ormstown, Que.
Osceola.
Lancaster.
1883 Toronto.
Cambridge, Mass.
Morrisburg.
Goderich.
(Deceased.)
Cornwall H. S.
(Deceased.)
(Deceased.)
Arnprior.
Revelstoke, B.C.
Chatham, N. B.
Arnprior.
Arnprior.
Pictou, N.S.
London, Ont.

Date of
Name.
*Maclean, Matthew W., B.A., 1869 ; M.A.

McLean, N. J., B.A. . . . . . .... 1899
19 McLean , R. A., B.A.
McLean, Solomon C., M.D
McLean, Thomas F., M.D.
McLellan, D., B.A., M.D.
McLellan, James A., M.D. . ....
McLennan, A. L., B.A.
*MacLennan, Alex. K., B.A., '91; B.D.

McLennan, Alexander S., M.D.
McLellan, C. Lillie, B.A
Maclennan, Donald B., K.C., B. A., 1857 ; M.A..

Maclennan, Donald, B.A., 1848; M.A.

McLennan, Donald R., M.D
McLennan, Duncan N., M.D
McLennan, Duncan N., M.D. . .. 1891 Toronto.
McLennan, Elizabeth, B.A. . . . . 1899

Maclennan, Finlay M., B.A. . . .
*McLennan, G. B.. B.A.
Maclennan, Hon. Mr. Justice Jas., B.A., 1849: LL.D.

McLennan, J. D., B.A., B.Sc. . .
Maclennan, James J., B.A.. ....
Maclennan. John, Sheriff, B.A
*Maclennan. Ken., B.A., '49; M. A
McLennan, K. R., B.Sc.
Maclennan. Roderick J., B.A
*Maclennan, Wm., B.A., '64; M.Ä
6 McLeod . Alexander, B.A
McLeod, J. A. F
*McLeod, John. B.A.
*McLeod, K. С., B.A.
McLeod, Lola. B.A.
McLeod, R. Norman, B.A.
4, 7. 15, 17. *McLeod, Peter A., B.A., 1887; M.A., 1890; B.D.

McMahon, James, M.D... .. ...
McManus, Emily, M.A.
McManus, John P. C., M.D. ...
Macmilan, Duncan, Judge, B.A.
$1852^{2}$

1879 (Deceased.)
1872 Arlington Beach, Sask.
Pembroke.
Smith's Falls.
Spencerville.
(Deceased.)
New York.
Economy, N. S.
Tilsonburg.
(Deceased.)
1894 Boston, Mass.
1873 Chicago, Ill.
1906 Port Hope.
1861 Cornwall.

1897 Cornwall.
1899 Canadian Pres. Mission, Wei Hwei, Honan, China.

Huntsville.
1885 Ottawa.
1902 (Deceased).
1887 Toronto.
1855 Lindsay.
1868 (Deceased.)
1904 Transcont. Rv. Survey, Lake Abitibi.
Toronto.
(Deceased.)
Morden, Man.
(Deceased.)
(Deceased.)
Ponoka, Alta.
Kingston.
Arcola, Sask.
1892 Truro, N.S.
1873 Texarkana, Texas.
1894 Ottawa.
1897 Bath.
1857 (Deceased).

Date of
Name.
*McMillan, A., B.A... . . . . ... 1899
MacMillan, A. D., M.D. . . . ... 1905
MacMillan, A. E., M.D. .. . ... 1903
McMillan, G., B.A. . .............. . . 1906
McMillan, Hugh H., B.A.. .... 1880 Davenport, Wash.
*McMillan, J., D.D., B.A., 1862; B.D
*McMorine, John, D.D.. .. .... 1865 (Deceased.)
*Macmorine, Jno. K., B.A., 1859; M.A., 1863 ; D.D

1903 Kingston.
*Macmorine, Sam., B.A., 1865; M.A. .

1872
*McMullen, Andrew J., B.A. . .. 1893
McMurchv, Archibald, B.A., 1875 ; M.D.

1883
McNab, A. J., B.A., B.Sc. . . . . . 1902
4McNab, Eliz. M., B.A., '01; M.A. 1902
*Macnab, Findlay F., B.A. . .... 1859
McNab, George G., M.A.
1902
McNab, Robert C., B.A. . ... .. 1896
McNamara, J. P., M.D. . . . ... 1907
McNaughton, Elizabeth, M.A... 1900
*Macnaughton, James P., B.A... 1884
McNee, J. E., M.D.. . . . . . . . . 1891
Macnee, James H., B.A. .. . . . . . 1885
Macnee, Peter C., B.A.
1873
MacNeill, W. K., B.Sc. . .. .... 1903
McNichol, Eugene C., M.D..... 1877
McPhaden, Murdoch M., M.D. . 1880
McPhail, A. C., B.A.
1899
*McPhail, Donald G., B.A. . ... 1889
Macphail, J. G., B.A., 1903 ; B.Sc.

1905
*McPhayden, Hugh, B.A.. .. .. 1881
Macpherson, Alexander J., M.D. 1862
McPherson, Charles F. S., M.D. 1896
McPherson, Edgar Allan, B.A.... 1900
Macpherson, Hattie G., B.A. . . . 1897
Macpherson, Hector, B.A. . . . . . 1903
Macpherson, Henry, B.A
1851
Macpherson, Jas. P., B.A., 1857; M.A.

Macpherson Ma............ 1865
*McPherson, Neil, B.A., 1889; M.A., 1891; B.D.

1894
McPherson, Norman A., B.A... 1889
McPherson, R, J., B.A., ...... 1898

Portage la Prairie.
Merrickville.
North Bay.
Can. Smelting Works, Trail, B.C.
Lindsay.
Arnprior.
Renfrew.
(Deceased.)
(Deceased.)
Cornwall.
Smyrna, Turkey.
(Deceased.)
Kingston.
Picton.
Sidney, N.S.
Cobourg.
Mount Forest.
Toronto.
Toronto.
Ottawa.
Manilla.
(Deceased.)
Prescott.
Prescott.
Univ. of Halle, Ger.
(Deceased.)
Ottawa.
Hamilton.
Indianapolis, Ind.
Cartwright, Man.

Name.
McPherson, Wallace A., B.A.... 1891 McPherson, William A. A., M.D. 1891 Macpherson, W. E., LL.B. . ... 1898 McQuarrie, Alexander R., B.A. . 1862 *McQuarrie, W. J., B.A.. .. ... 1904
Macqueen, M. A., B.A.. ...... 1903 14 McRae, A. D., B.A., 1900 ; B.Sc. 1902 *Macrae, Donald, D.D. 1880
McRae, Caroline J., B.A. . . . . 1907
McRae, Donella M., B.A. . .. .. 1900
McRae, Thomas W. R., B.A.... 1886
McSporran, J. A., B.A. ...... 1902
*Mc'Tavish, Alexander, B.A.. .. 1881
6, 17, 20, 24, *McTavish, D., B.A., 1881; M.A., 1882 ; D.Sc...... 1885
McTavish, Duncan B., Judge, B. A., 1870; M.A.

1873
McVety, Albert F., M.D. . . . . 1886
McVicar, John, B.A... . . . . ... 1897
*Nairn, Robert, B.A... . . ... . . 1879
Nash, P. I., M.D.
1902
*Neill, Robert, D.D. . . . . . . . . . 1872
*Neill, John, D.D... . . .... . ... 1904
Neilson, Bertha, B.A.. . . . . .. 1896
Neish, A. C., B.A., 1898; M.A. . 1900
Neish, James, M.D...... . . .... 1865
Neish, George J., M.D.. .. .... 1890
Neish, William D., M.D. . . . . . . 1887
Neish, James, M.D. . . . . . . . . . 1897
Neish, D. B., M.D. . . . . . . . . . 1897
*Nelles, Samuel S., D.D... .. .. 1861
Nelson, John, B.A. . . . . .. . .. 1899
Nesbit, Edward, M.D. . . . ..... 1868
Neville, K. P. R., B.A., '96; M.A. 1897
Neville, M. J., M.D. . . . . . . ... 1893
Newell, James, M.D............... 1903
Newlands, George, M.D... .. .. 1879
Newlands, Isaac, B.A.. .. ... .. 1884
Newman, George E., B.A. . . . . . 1891
Newton, John, M.D.. . . . . .... 1866
5Newton, Meta, B.A. . . . . . ... 1902
Nichol, C. O., B.A.. . . . . .. .... 1905
*Nicholson, Alex. B., B.A. . ... 1867
Nickle, William F., B.A. . . . . . . 1892
Nicol, James, M.D. . . . . .... 1863
Nicol, Jennie (McKelvey), B.A. 1893

Denver, Col.
Prescott.
Prescott.
Pittsburgh.
Winnipeg, Man.
Kingston.
Calgary.
Perth.
Perth.
Westmount, Que.
Philadelphia.
Carnduff, Sask.
Toronto.
Ottawa.
Toledo, Ohio.
Edmonton, Alta.
Cort \& Neptune, Coney Is.
(Deceased.)
Toronto.
Wilton.
Columbia Univ., New York.
Port Royal, Jamaica.
Bath, Jamaica.
Old Harbor, Jamaica.
Kingston, Jamaica.
Port Royal, Jamaica
(Deceased.)
Ottawa.
(Deceased.)
Univ. of Ill., Urbana, Ill.
Brooklyn, N.Y.
Watford.
Seattle, Wash.
Buffalo, N. Y.
Brighton, H. S.
Deseronto.
Deseronto.
Hamilton.
(Deceased).
Kingston.
(Deceased.)
(Deceased.)

Date of
Name
Nicol, J. L., M.A.
8, 11, 14, 23 Nicol, Wm., Prof., Mining School), B.A., 1883; M.A.... .... .... ..... .... 1889

Nicolle, F. R., B.A., 1903; M.D. 1906
*Nimmo, John H., B.A., 1869; M.D.

Nimmo, H. M., B.A. . . . . . . . .. 1898
Nisbet, David A., B.A.
Nish, James, D.D.. .. .. .. ... 1880
*Niven, David P., B.A. . . . .... 1867
Noble, D. S., B.Sc. . . . . . . . ... 1902
Noel, John V., B.A. . . . . . . . . . 1863
Norris, Isaac T., B.A. . . . . . . .. 1894
8Norris, James, M.A. . . . . . ... 1893
North, Edwin, B.A. . . . . . . . . . • 1896
Northmore, Harold S., M.D. . . . 1889
Nugent, Andrew, B.A. . . . . . . 1876
Nugent, A., B.A., 1897; M.D.... 1899
Ockley, Beatrice A., B.A.. .. .. 1907
O'Connell, Marguerite E., B.A... 1906
O'Connor, C. E., M.D.. . . . . . . 1898
O'Connor, Charles, B.A.. .. ... 1890
O'Connor, F. J., M.D. . . . . . . . 1906
O’Connor, Michael J., LL.B. . .. 1892
Odell, Henrietta (Laird), B.A.. 1895
Odell, Lena, B.A. ................ 1906
Odlum, John, M.D
Ogilvie, H. G., M.D. . . . . .... 1899
Ogilvie, Nettie, M.D.,(Oughten) 1888
O'Hagan, T. F., M.D.
O'Hara, Margaret, M.D. (Medical Missionary)
O'Hara, J. J., M.D.
O1dham, Jdind M.......... 1881
Oldham, Edmund, M.D
Oldham, John H., M.D
Oliver, Alfred S., M.D. . . . . . . . 1863
Oliver, John K., M.D
Oliver, Marion, M.D. (Medical Missionary).
O'Loughlin, Robt. S., B.A., 1865 ; M.A.

O'Neil, Thomas, M.D
O'Reilly, Anthony, M.D
6O'Reilly, James R., Judge, B.A
O'Reilly, T. J., M.D.
O'Rourke, Thos. A., B.A., LL.B. 1895

1886
1892

1880

1891
1881
1891
1868
1886
1874
1888
n] Address.
Jarvis.
(Deceased.)
Kingston.
Kingston.
Barriefield.
Detroit, Mich.
Newburgh H. S.
(Deceased.)
St. Latharines.
Can. Smelting Works, Trail, B.C.
(Deceased.)
Ottawa.
Walkerton H. S.
Young's Point.
Bath.
(Deceased.)
Dhar, Central India
Kingston.
Peterboro.
Kingston.
(Deceased).
Long Point.
Ottawa.
Kingston.
Belmont.
Woodstock.
Kingston, Jamaica.
Kingston, Jamaica.
Frank, Alta.
Dhar, India.
Alma City, Minn.
Chatsworth.
Yarker.
(Deceased.)
(Deceased.)
Indore, India.
Butterick Pub. Co., New York.
(Deceased.)
1861 (Deceased.)
1852 Cornwall, Ont
1902 (Deceased.)
Trenton.

Date of

## Name.

Orr, W. J., B.A.
Graduation. Address.
Kingston.

New York.
St. Thomas, Ont.
(Deceased.)
Alexandria.
(Deceased.)
Montreal.
(Deceased.)
Buffalo, N:Y.
Elmira, N.Y.
Montreal, Que.
Kingston.
(Deceased).
Bermuda.
Chicago, Ill.
Iroquors.
Quebec.
Toronto.
Alberta.
Saskatchewan.
*Patterson, Gilbert C., B.A., 78 ; M.A.

1880
Patterson, Harriet A., B.A.. .. 1906
Patterson, James A., M.D. . . . . 1889
Patterson, James R., M.D.. .... $186^{\circ} 7$
Pàtterson, John N., M.D. . . . . . 1890
Patterson, Richard L., M.D.. .. 1885
3, 13 Patterson, Wm. J., B.A.,'ss;
M.A., 1895; M.D...... ....... 1902
Patterson, W. R., B.A. . . . . . . 1902
Paul, H. E., B.A., 1898; M.D... 1901
Paul, J. H., M.D.. . . . . . .... 1898
Paul, R. D., M.D.
1907
4, 7Peacock, Edward R., M.A... 1804
Pearce, W. R., M.A. . ........ 1905
*5, 25, 4, 7Peck, W. W., M.A., '94; LL.B... ............ 1894
Pennock, N. İ., M.D... .. ........ 1904
Pense, E. H., B.Sc. . . . . . . . . . 1903
Pentland, G. E., B.A. . . . .. ... 1904
Peppard, H. M., B.Sc. . . . . . . . . 1907
Perault, Julian, M.D. . ... .. . . . 1857
Perney, F. E., B.A. . . . . . . .. . . . 1903
*Perrin, Louis, B.A. . . . . . .... 1884
Petapiece, A. W., B.A.
1903
Date of Graduation. Address.
Peterson, Wm. C. M. G. (Princi-pal and Professor of Classics,McGill University), LL.D... 1903
5Pettit, L. J., B.A ..... 1904
*Petrie, J. A., B.A., 1901; B.D... ..... 1906
*Phalen, Ronald M., B.A. ..... 1889
Phelan, Daniel, M.D ..... 1877
Phelan, Leopold, B.A., M.D. ..... 1890
Philp, J. H., M.A. ..... 1903
Pierce, Ada E., B.A. ..... 1904
Pilkey, P. J., B.A. ..... 1895
Pike, N. J., M.D. ..... 1898
Pinkerton, W. A., B.Sc. ..... 1906
Pirie, Alexander F., M.D ..... 1887
Pirie, Edwin, B.A. ..... 1888
Pirie, H. H., B.A., 1887; M.D. ..... 1890
Cartago, Costa Rica.
Pitblado, Colin, M.D ..... 1886
*Pitts, F. E., B.A. ..... 1897
Playfair, L. L., M.D ..... 1906
1Playfair, Alfred W., M.A. ..... 1896
Platt, E. O., B.A. ..... 1904
Platt, G. A., B.A ..... 1906
Pocock, C. E., B.A. ..... 1902
*Pollock, Peter M., B.A.. .. .. 1881 ..... 1881 Scotland.
*Pollok, Allen, D.D., (Principal, Presbyterian College) ..... 1876
Halifax.
Polson, Susan C., (Rollins), B.A. ..... 1896
4Polson, S. M., M.A ..... 1905
Poole, A. W., B.A. ..... 1899
Poole, Edna, B.A ..... 1907
Pope, Egerton L., B.A ..... 1895
Pope, F. J., M.A.. ..... 1891
Pope, Step. D., B.A., '61; LL.D. ..... 1890
Porteous, C. A.. M.D ..... 1901
Porter, S. E., M.D ..... 1900
Porter, W. C., B.A.. ..... 1903
*Potter, James G., B.A. ..... 1891
Potter, Levi. M.D ..... 1870
Potter, R., B.Sc ..... 1907
Potter, Samuel, M.D ..... 1875
Potter, Thomas, M.D ..... 1876
Powell, George K., B.A ..... 1891
Powell, W. B., B.A. ..... 1901
Power, Gertrude F. E., B.A ..... 1903
Power, J. F., M.A. ..... 1899
Power, John J., B.A. ..... 1900
Pratt, William F.. M.D. ..... 1888
Pratt, Wilton, M.D ..... 1888
Montreal.
St. Thomas.
Belleville.
Horning's Mills.
Kingston.
Ackley, Iowa.
Morrisburg.
Willetsholme.
Fort William H. S.
Saginaw, Mich.
Portiand.
Cartago, Costa Rica.
Parry Sound.
(Deceased.)
New Liskeard.
Hamilton.
Tokio, Japan.
Plainfield.
Harvard Univ.
Lyn.
London.
Kingston.
Poole's Resort.
Winnipeg, Man.
104 John St N.Y. City.
Victoria, B.C.
Montreal, Que
South Mountain.
Cleveland, Ohio.
Peterboro.
Enniskillen.
Fernie, B.C.
(Deceased.)
Ottawa.
Toronto.
Brockville.
Kingston.
London.
Halifax, N.S.
(Deceased.)
Carleton Place.
Prendergast, A. R., B.A. ..... 1901
-309-

Date of
Name.
Preston, Richard, M.D.
Preston, Robert H., M.D.
Price, Cornelius V., Judge, LL.B. 1863
Price, Edwin, B.A.. . . . . . . .. 1888
Price, Robinson B., M.D.
1886
Pringle, H. S., B.A. . . . .. .... 1899

- *Pringle, John, B.A., 1875; D.D. 1904

Pringle, J. F., B.A. . . . . . ... 1905
Pringle, Robert H., B.A... . . . . 1882
Pritchard, J. A., M.D. . . . . . .. 1903
*Prittie, W. T., B.A... . . . . . . . . 1897
Proderick, W. S., M.D. . . . . . .. 1900
Publow, C. A., M.D. . .. .. .... 1906
Purdy, Alvanley N., M.D. . .... 1873
Purdy, Charles W., M.D., 1869;

## LL.D.

Purdy, May C., B.A. . .. .. .... 1904
Purdy, Victor M., B.A. . . . .. . . 1894
Purvis, W., B.A.. . . . . . . . . . . 1899
Putman, J. H., B.A. . . . . . .. .. 1899
2Quigley, J. P., M.A., 1903; M.D. 1907
Race, W. B., B.A. . . . . . . . . . . . 1903
Rafter, R., B.A. . . .. . . . ...... 1907
Rainsbury, W. C., M.D. . .. .... 1900
Rainstead, H., M.D... ............ 188 .
6Ramsay, D. C., B.A., 1906; M.A.. 1907
Ramsay, Robert, M.D. . . . . . . . . 1861
Ramsay, W.. B.A.. . . . . . . .... 1902
Rand, Silas T., LL.D. . . . . . . . . 1886
Randall, C. R., M.D. . . . . . . . . . 1905
Raney, Wesley H., B.A.. . . . . . . 1895
Rankin, William H., M.D. . .... 1889
*Rannie, Alex., B.A.. .. .. .. . 1898
Ranstead, William, M.D. . . . . . . 1887
Rathbun, Herbert B., B.A.. .... 1883
3*Rattray, James. B.A.. ........ 1887
Rawlins, J. W., B.A., 1899; B.Sc. 1901
Raymond, C. Nelson, M.D. . .... 1891
Rayside, Edith, B.A.. . . .. .... 1896
Redden, H. O., M.D. . . . . . . . . 1906
Redden, Marion, B.A. . . . . . . . . 1903
*Reddon, John A., B.A... . . . . . 1889
Redmond, A. V., B.Sc.
1903
Redmond, Robert C., B.A., 1895 ;

## M.D <br> 1898

Redmond, W. C., M.D
Redmon, C. A M.D.. ...... 1901
Reed, A. L., B.A.
1907
Reekie, J. S., M.D. . . . . . . . . . . 1902
875
Address.
Carleton Place.
Ottawa.
Kingston.
Dundas.
Bath.
Oak Park, Ill.
Dawson, Yukon.
Cornwall.
Brampton.
New York.
Vernon.
Ottawa.
Kingston.
Grand Falls, Mon.
(Deceased.)
Kingston.
Sherbrooke, N.S.
Rosthern, Sask.
Ottawa.
Kingston.
London, Ont.
Arthur.
Skegby, Notts, Eng. Ottawa.
Grand Valley.
(Deceased.)
(Deceased.)
Seeley's Bay.
Lachute, Que.
Brooklyn, N. Y.
Nairn.
Ottawa.
(Deceased.)
Eganville.
Copper Cliff.
New Rochelle, N.Y.
Indian Head, Sask.
Saginaw Hosp., Mich.
Kingston.
Fort Coulonge.
Kingston.
Wingham.
Bethel.
Lucy, Barbadoes.
Sidney, N. S. W.

Date of
Name.
Reeve, Richard A., M.D., (Dean, Toronto School of Medicine)
Reeve, John L., M.D.
1865 Toronto.
1880 Cinton.
Reeve, Henry H., M.D. . . . .... 1880
Reid, Etta A., (Newlands) M.A.
1892
Reid, E. J., B.A. . . . . . . . . . . 1904
Reid, F. D., B.Sc. . . . . . . . . . . . 1904
Reid, G. M., M.D. . . . . . . . .... 1903
Reid, J., M.D
1906
Reid, J. A., B.Sc. : . . . . . . . . . 1902
Reid, Jean G., B.A. . . . . . . ... 1907
Reid, John D., M.D., M.P. . .... 1890
Reid, Lulu, B.A.
1905
Reid, R. M., M.D. . . . . . . . . . . . 1902
Reid, R. G., M.D. . . . . . . . . . . . 1905
Reid, S. M., B.A.
1899
Reid, Victoria, B.A., 1900 ; M.D. 1904
*Reid, William, D.D. . . . . . ... 1876
Reid, William D., M.D.
1880
Reid, M. R., M.A.. . . . . . . . . . . 1897
Reilly, Adrian, M.D. . . . . . .. . . 1862
*Renaud, Allen C., B.A.
Reynolds, Helen E..(Ryan), M.D
1864
1885
Reynolds, M., B.A., 1903; M.D... 1905
Rhoades, H. G., B.A .............. 1906
*Richardson, A. W., M.D. . ... 1899
Richardson, E., M.D. . . . . . . . . . 1901
Richardson, G. T., B.Sc............ 1906
Richardson, J. A., B.A............ 1906
Richardson, William W., B.A... 1893
Rielly, F. J., B.A. . . . . . . . . . . 1903
Rielly, F. V., B.A. .. . . . ........ 1907
*Rigby, O., (Headmaster, Trinity College School), LL.D.
Rigney, Timothy J., B.A. . . . . . 1895
Ritchie, Geo., B.A.. 1878; B.Sc. . 1878
Rob, A. D. C., M.D. . . . ...... 1907
Robb, D., B.A.. .. . . . . . . .... 1903
Robb, David, B.A.... . . . . .... 1907
Robb, J. J., B.A., 1904 ; M.D.... 1905
Robb, W. M., M.D................. . . . 1905
38Robertson, Alex. M., M.A..... 1896
Robertson, Alexander C., M.D. . 1893
Robertson, Donald M., B.A. . .. 1886
Robertson, D. M., B.A. . .. .... 1899
Robertson, G. D., B.A. . . . . . . . . 1903
Robertson, J. B., B.A. . . . . . . . . 1903

Address.
(Deceased.)
Kingston.
Kingston.
Kingston.
Didsbury, Alta.
Renfrew.
Hamilton.
Renfrew.
Cardinal.
Kingston.
Osgoode Station.
Erie, Pa.
Kingston.
Kingston.
(Deceased.)
Barre, Vt.
Napanee.
(Deceased.)
Montreal.
Kingston.
Athens.
Hamilton.
Kingston.
Brockville.
Kingston.
Kingston.
Winnipeg.
Sydenham.
Kingston.
Port Hope.
Kingston.
Toronto.
Nashville, Teuli.
Brussels.
Battersea.
Battersea.
Lunenburg.
Harriston.
Dawson, Y. T.
Toronto.
St. Anne's.
Stratford.

Date of
Name.
Robertson, J. J., B.Sc Graduation. Address.

Robertson, John W., M.D... .... 1888
Robertson, J. W:; LL.D.
Robertson, Miles S., B.A.. ..... 1884
Robertson, Struan G., B.A.
Robinson, Andrew, M.D. . . . . . 1889
Robinson, Andrew, M.D. .... .. 1895
Robinson, Edward B., M.D.. .. 1891
Robinson, F. A., B.A.. . . . . ... 1904
Robinson, J., B.A. . . . . . . . . . . 1903
Robinson, E. J., M.D. . .. . . . . . 1904
Robinson, Robert P., M.D.. .... 1888
Robinson, Robert R., M.D... . . . 1892
Roche, William P., M.D. . . . .. 1860
Rockwell, Albert, M.D.. .. .... 1868
Rockwell, Ashbel S., M.D. .. . . 1872
Roddick, A. M., B.A................ 1906
Roddick, T. G., LL.D., (Dean of the Faculty of Medicine, McGill University)
Rogers, James C., B.A. . . . .... 1894
1Rogers, C. S. G., M.A.
Rogers, R. Vashon, B.A., 1861; LL.D.
Rogers, David H... M.D.. .. .... 1881
Rogers, W. R., B.Sc
28Rogers, W. C., M.A.. .... . . 1899
*Rollins, James, B.A. . . . . . . . . . 1895
Rollo, James, B.A.. .. .. . . ... 1852
*Romanes, George, Li.D.. .. .. 1866
Roose, E. C. Robson, LL.D.. .. 1889
Rose, George R., B.A., '56; M.A. 1860
*Rose, G. W., B.A. . . . . . . . .. 1898
Kose, S. L. E., B.Sc. . . . . . . . . . . 1903
Ross, Alex. H. D., B.A., '88; M.A. 1889
Ross, Arthur E., B.A., '92 ; M.D. 1897
*Ross, Donald, B.A., 1860 ; M.A., 1862 ; B.D., (Prof., Queen's University)
Ross, George S., B.A... .. .. .. .. 1856
Ross, G. W., Hon., LL.D........ . 1903
*Ross, James, D.D. . .. ........ 1864
*Ross, James, B.A., 1878 ; M.A., 1881; B.D., 1881; D.D........
Ross, John Reid, B.A.. .. .. .. 1862

1891

1907

1898
Fergus Falls, Minn.
Tweed.
Ottawa.
St. Anne de Bellevie, Que.
Violet.
Hopewell, N. S.
Kalamazoo, Mich.
Fort Wayne, Ind.
Stirling.
Hamilton.
North Williamsburg.
Ottawa.
Trout Lake, B.C. (Deceased.)
Lewiston, Idaho.
Rochester, N.Y.
Edmonton, Ali:

Montreal, Que.
1735 46th St.,
Brooklyn, N.Y.
1901 New York.
1895 Kingston.
Gananoque.
Latchford.
Linden Valley.
London.
(Deceased.)
(Deceased.)
London, Eng.
(Deceased.)
Mono Centre.
Tamworth.
Ottawa.
Kingston.

Kingston.
Toronto.
(Deceased.)
London.

Date of Name.
Ross, Thomas K., M.D. Graduation. Address. 1863
(Deceased.)
*Ross, Walter, B.A., 1859; M.A. 1862 Ross, William A., Judge, B.A... 1855 Ross, W. J., M.D. 1900
Rothwell, William, B.A.. .. ... 1881
Rourke, Francis, M.D.
Row, R. K., B.A.
Rowse, Mark R., B.A.
Roy, E., M.D
1872
1897
1870
1901
Roy, Henry, M.D
1885
Russell, Donald G., M.D
1885
Russell, F. Howard, B.A. 1889
Russell, Jean McG., (Young) B.A 1894
Russell, Margaret, B.A. . .. .... 1897
Russell, W. J., B.A.
1900
Russell, Samuel, B.A. . . . . . . . . 1882
Rutledge, S. H., M.D. . . . . . . . . 1904
Ruttan, Emily, B.A. . .. .. .... 1902
Ruttan, Franklin S., M.D. . .... 1893
Ruttan, Joseph B., M.D. . .... . . 1863
Rutherford, David B., M.D. . .. 1882
Rutherford, James, M.D... . . .. 1870
Ryan, Clara, M.D.
1893
Ryán, Edward, B.A., 1886 ; M.D., (Prof., Queen's University).
Ryan, Michael D., M.D. . .... .. 1891
Ryckman, Freda L., B.A. (Dale).
Ryerson, S. Edward, M A ... 1895
St. Remy, C. de, M.D. . . . .. ... 1902
Sadler, G. S., M.D. . . . . . . . . . 1899
Sands, Ernest, M.D. . . . . . . . . . 1889
Sands, J. M., B.Sc. . . . . . . . . . . 1907
Sands, Wm. W., M.D. . . . . . . . 1894
Sandwith, B. A., M.D. . . . . . . . 1906
Sargent, F. R., B.A. . . . . . . ... 1905
Saunders, Elsie E., M.A.. .. ... 1905
Saunders, Herbert J., M.D. . ... 1869
Saunders, Lawrence, M.D. . .... 1868
Saunders, T. F., M.D.... . . . . 1906
Saunders, Wm., F.R.S.C., LL.D. 1896
14Saunders, W. J., M.A. . .. ... 1900
Saunders, W R., B.A. . . . . . ... 1899
Sayers, Alexander, M.D. . . . ... 1870
Scales, Thomas, B.A., '78; M.D. 1887
20Schofield, S. J., B.A., 1906, M.A. 1907
(Deceased.)
(Deceased.)
(Deceased.)
(Deceased.)
Berwin, Ill.
Bath.
Forester, Sanilac Co., Mich.
Chisholm.
Spokane, Wash.
Victoria, B. C.
(Deceased.)
Ottawa.
Crystal City, Man.
Deseronto.
Thomasburgh.
Kingston.
Yarker.
Wellington.
(Deceased.)
Orono.
Barriefield.
Kingston.
Saginaw, Mich.
(Deceased.)
(Deceased.)
Combermere.
(Deceased.)
Rossland, B.C.
Kingston.
Kingston.
Kingston.
(Deceased.)
(Deceased.)
Rhinebeck, N.V
Ottawa.
Brantford.
Dundas H. S.
(Deceased.)
(Deceased.)
Kingston.

## Date of

Graduation. Address.
Schultz, Hon. John C., M.D.,

LL.D., 1894; B.Sc...... ..... 1902
Scott, A., B.A.. . . . . . . . ..... 1899 *Scott, Alex. H., B.A., ;75; M.A. 1878 Scott, Carrie L., B.A. . . . . . . . . 1907
8Scott, Colin A., B.A. . . . . . . 1885
Scott, H. H., B.Sc. . . . . . . . . . 1905
Scott, J. M., B.A.
1897
Scott, Jean M. C., B.A. . . . .... 1905
*Scott, Marcus, B.A. . . . . . ... . 1893
Scott, O. N., B.Sc. . . . . . . . . .. 1903
Scott, Patrick J., M.D. . . . ...... 1888
Scott, R. A., B.A., 1905; M.D ... 1907
Scott, R. H., M.D................. . . 1905
*Scott, Thomas B., B.A., 1875; M. D., (Medical Missionary)... 1892
*Scott, Thomas R., B.A. . ... .. 1888
Scott, T. S., B.A., 1894; B.Sc. ... 1897
Scott, Wm. J., M.D. . . . . . . . . 1891
Scott, William S., M.D. . . . . . . 1855
Scott. W. B., M.D.. .. ...... 1897
Scovill, Simmons S. S., M.D.... 1877
Scribner, J. F., M.D. . . . . . . . . 1898
Seager, James, M.D. . . . . . . .... 1894
Sears, J., B.Sc. . .... .... .. .. .. 1905
Searls, Abraham W., M.D. . .... 1864
Seath, John, B.A., LL.D. . ...... 1902
Seaton, E. T., B.A. . . . . . . . . . 1897
*Sedgwick, Robert, D.D. . . . ... 1878
Sexsmith, M. E., B.A., 1903;
LL.B. . .. .. .. .. .. .. ... 1904
Sexton, J. H., M.A. . ............ 1902
Shannon, Jno. R., B.A., '85 ; M.D. 1890
Shannon, Lewis W., B.A. . . . .. 1877
Shannon, Robert W., B.A., 1875 ; M.A. . . . . . . ... .. .. ..... 1880

Shannon, S. S., M.D. ............. 1906
Sharp, Helena A., B.A... ........ 1905
*Sharp, John, M.A. . . . . . . . . 1892
Shaw, A., M.D. . . . .. .. ... ... 1899
Shaw, John M., B.A., 1883 ; M.D. 1886
Shaw, Lily, B.A.. . . . . . . . . ... 1903
Shaw, Robert, B.A............. 1873
Sheffield, E. B.A., 1900; M. $. \ddot{D} . .$. . 1903
Shenick, Adeline, B.Sc., B.A.... 1891
*Sheraton, James P., D.D.... .. 1882
(Deceased.)
Temagami.
Perth.
Napanee.
Chicago.
Montreal, Que.
Philadelphia, Pa.
Kingston.
Detroit.
Coleman, Alta.
Southampton.
Walkerton.
Pembroke.
Jaffna, Ceylon.
Oxbow, N.W.T.
Shawinigan Falls, Que.
Lanark.
(Deceased.)
Crystal, N. Dak.
Rat Portage.
Curlew, Iowa.
Ottawa.
Kingston.
(Deceased.)
Toronto.
Caledonia.
(Deceased.)
Centreton.
Kemptville.
20 West 35th St., New York.
London.
Dawson City, Y.T.
Kingston.
Odessa.
New Liskeard.
Boston, Mass.
Lansdowne.
Kingston.
(Deceased.)
Peterborough.
(Deceased.)
(Deceased.)

Date of
Name.
2, 19Shibley, G. R., M.A Graduation. Address.

6Shibley Henry T B . . ... 1901 Kingston.

6Shibley, Henry T., B.A.
Shibley, Jennie M., (Cram) B.A.
Shibley, Laura, B.A
1881 (Deceased.)
1900 Cobden.
1890 All Hallows' School, Yale, B.C.
Shier, James, B.A.. ...... .... 1862
Shirley, Joseph W., M.D.. .. .. 1863
Shirreff, W. T., M.D. . .. .. ... 1903
8, 11Shorey, Edm. C., B.A., '86; M.A., 1887; D.Sc

1896 Washington.
Shorey, P. M., B.Sc. 1906
5 Shortell, D. H., M.A.
4, 13, 22Shortt, Adam, (Professor, Queen's Univ.) B.A., 1883;


1884
Shurie, Josiah S., B.A.. . . . . .
*Sieveright, James, B.A.. ... .. 1855
Sieveright, James A., M.D.. ... 1870
S¢. ills, Wm. R., M.A. . . . . . . . 1895
Silver, L. P., B.Sc. .
1902
Simpson, B. L., B.A., 1903 ; M.A. 1904
Simpson, James, B.A. . . . . . . . 1864
Simpson, W. J., M.D. . . . . . . . . 1899
Sinclair, Anna E., B.A. . . . .... 1901
Sinclair, H. H., B.A. . .. .... . . 1899
4*Sinclair, John A., M.A. . .. .. 1890
*Sinclair, Robert C. H., B.A.... 1888
Sine, F. L., M.A..
Singleton, A. H., B.A., 1901; M.D.

Singleton, Jessie W., B.A.. .... 1905
1, 2, 19Skelton, O. D. (Lecturer Queen's University), M.A....
Skimin, Nellie St. G., M.D. . ... 1892
Skinner, Henry, M.D.
1862
Skinner, John S., B.A. . . . . . . . 1883
9Slack, E. B., B.A.. . . . . . . .. 1902
Sloan, D., B.Sc. . . . . . . . . .. .. 1905
Smart, R. S., B.A.
1907
Smart, V. I., B.A.. .. . . . . .... 1898
Smeeton, W. F., B.Sc. . . .. .. 1900
Smellie, Donald McK., M.D. . . . 1888
*Smellie, George. D.D. . . . . . . . 1885
Smellie, James F., B.A. (Wilson)
Smirle, Harriette M.A.

Smith, A. L., M.D............ 1902 State Hosp, Utica, N.Y.

Date of
Name.
Smith, Alexander L., B.A. Graduation. Address.
1883 Alexandria
Smith, Annie, B.A.. .. .. .. .. 1894
Smith, A. G., M.D. . . . . . . . . . 1898
Walkerville.
Deseronto.
Smith, B. A., M.D. . . . .. . . .. 1905 Hartington.
Smith, Donald (Earl Strathcona), LL.D.

1905 London, Eng.
Smith, D. T., M.D. . . . . . ..... 1901
Smith, Elizabeth, (Shortt) M.D. 1884
Smith, Frederick B., M.D. . .... 1886
Smith, George, M.D... ....... 1858
Smith, George H. W., M.D. . .. 1892
Smith, Gordon J., B.A. . . . .... 1886
Smith, J. E., B.A. . . . . . . .... 1901
*Smith, James F., M.D.. . . .... 1888
*Smith, James C., D.D., B.A., 1861; M.A., 1863 ; B.D. . ... 1880
Smith, J. C., B.A. . .. .. .. .... 1898
Smith, James H., B.A. . . . ..... 1903
Smith, James H., M.A. . . . . . . . 1893
Simith, John R., M.D. . . . . . ... 1863
Smith, N., M.D. . . . . . . . . . . ... 1904
Smith, Ralph G., M.D.
1893
Smith, S. H., M.D
1906
Smith, S. M., M.D. . . . . . . . . . . . 1900
Smith, T. G., B.A.................. . 1905
Smith, Violet B., B.A.. . . . . . . 1897
Smith, W. A., M.D
1905
Smyth, Robert A., M.D
1883
*Smyth, William J., B.A
Smythe, George H., B.A.
1881
Smyth, W I B Sc, B.A. . .. .. 189
Smyth, W. L., B.Sc
1906
*Snell, G. W., B.A.
1899
3Snell, Joseph, M.A.
1890
Snider, Elias T., M.D
Snider, Samuel H., M.D.
1889
Snook, Marcus S., B.A. .
1881
Snowden, H. A., B.A.
1881
*Snowdon, John M., B.A
1902
Snyder, H. Adell, M.A.
1885
Snyder, J. B., M.D.
1895
Snyder, T., M.D.
1906
*Solandt," D. $\ddot{M} ., \quad$ B.A., 1900 ; B.D., 1905 ; M.A.

Solmes, Harriet M., B.A.......... 1906
Somerville, Jas. A., B.A., 1858; M.D.
*Somerville, James $\ddot{\mathrm{F}}$., $\ddot{\mathrm{B}} . \ddot{\mathrm{A}}$.
1866
Spafford, H. W., M.D
1881
Spankie, A. T., M.D
Ottawa.
Kingston.
Watertown, N.Y.
(Deceased.)
Sydney, N.S.W.
Paris.
Burnbrae.
Comber.
(Deceased.)
Wingham.
Kuhryville.
Dutton.
(Deceased.)
Bridgeport, Conn.
Oakland, Iowa.
Chambers.
S. Milwaukee, Wis.

Smith's Falls.
Stanstead, Que.
Rochester, N.Y.
(Deceased.)
(Deceased.)
Kingston.
Pembroke.
West Brome, Que.
Moosomin, Sask.
Inwood.
Carman, Man.
(Deceased.)
Ottawa.
Chicago.
Lancaster.
Niagara Falls, N.Y.
Winnipeg, Man.
Picton, Ont.
(Deceased.)
Toronto.
1855 (Deceased.)
1907 Wolfe Island.

Date of
Name
24Spankie, Wm., B.A., '62 ; M.D. 1885 Spankie, James E., M.D... .. .. 1891

Spankie, W. E., M.D. .... . ... 1906
Sparham, George S., M.D. . ... . 1859
Sparks, J. F., B.A., 1901; M.D.. 1905
Sparks, W. F., B.A. . . . . . ... 1903
Spear, Hugh, M.D. . . . . . .. .. 1873
9Speers, J. A., B.A., 1905 ; M.A.. 1906
*Spence, Alexander, D.D. . . . . 1864
Spence, H. D. L., B.A., 1904; M D. 1907
Spence, J. C., B.A. . . . . . . . ... 1903
Spencer, Amy, B.A.. .. .. .... 1907
Spencer, Henry, M.D 1862
Spooner, Armon C., B.A., 1896 ; M.D.

Spooner, George D., M.D. . .... 1860
Spooner, Hiram R., M.D. . . . .. 1869
Spooner, Margaret M., (Abbott) B.A.

Spotswood, Edna, B.A
Spotswod, W A B.A...... 1901
Spotswood, W. A. J., M.D. . ... 1903
Sproat, Alexander, B.A.. .. ... 1853
*Sproul, Nathaniel J., B.A.. ... 1891
Sproule, E. W., M.D. . .. . . .. 1905
Squire, George H., B.A. . . . .. 1893
Squire, R. L., B.Sc. . . . . . . . . . . 1904
Squire, Wm. W., B.A.,' '54; M.A. 1864
Staley, A. A., M.D. ..... ..... 1903
Stanley, Rt. Hon. Earl Derby, LL.D.

1889
Stanley, J. N., M. M.A. . . . . . . . . . . 1901
11Stead, J. H., M.A............... . 1906
29Staples, Louis, M.A. . . . . . .. 1895
*Steele, Jacob, B.A., 1883; B.D.. 1889
Stevens, F. G., B.Sc., 1900 ; M.E. 1901

Stevens, Nathaniel T., M.D
Stevenson, Alexander J., B.A.
Stevenson, John A.. M.D.. .. . .
*Stevenson, John F... D.D....... 1880
*Stevenson, R. M., B.A., 1905 ; B.D. 1904
Stewart, Alexander, M.D.. . . .. 1889
Stewart, Alexander J., M.D.. .. 1869
Stewart, Daniel W.. B.A..
1884
Stewart, Ernest J., B.A... ....... 1896
Stewart, Flora Belle, B.A....... 1898

Wolfe Island.
Halcyon Hot Springs, B.C.

Wolfe Island.
(Deceased.)
Kingston.
Toronto.
Alliston.
(Deceased.)
Kingston.
Ottawa.
Sault Ste. Marie.
(Deceased.)
Latimer.
(Deceased.)
(Deceased.)
280 James Place,
Brooklyn, N.Y.
Riceville.
Alexandria.
(Deceased.)
Peterson, Iowa.
New York.
Ottawa.
(Deceased.)
Wolfe Island.
England.
Port Colborne.
Lyn, Ont.
Kingston.
Callander.
Mining Supt., Guanajuata Cons. Mining \& Milling Co., Guanajuata, Mexico.
Clifton, Ill.
Minden.
Chicago.
(Deceased.)
Ridgetown.
(Deceased.)
Orillia.
Renfrew.
Renfrew.
Harrowsmith.

Date of

Name.
Stewart, George G., M.D.
6 Stewart, James, M.D.
8Stewart, James A., M.A
Stewart, John M., M.A.
Stewart, J. R., B.A., 1904 ; M.D...
Stewart, Lily D., B.A
Stewart, Margaret J., B.A. (Mc$\mathrm{Nab})$
Stewart, Martha G., B.A. . . . .. 1902
3Stewart, William, B.A.
Stewart, A E M. . . . . . ..... 1898
Stiles, L. P., B.Sc.
Stilwell. A. J., B.Sc. . .. .. .... 1902
Stilwell, G. B., B.A.
Stirling, James A., M.D. . . . .... 1885
Stirling, John E., M.D. . .. .... 1884
Storey, G. E., M.D... ............ 1907
Storms, Douglas G., M.D. . .... 1886
34Story, Selina G., M.A.. .. .... 1901
Stothers, Minerva E., B.A....... 1906
Stothers, R., B.A. . . . . . .. .... 1899
Stott, W., B.A.
Stowell, Olmsby O., M.D. . .. .. 1869
Strachan, B. O., B.Šc, 1905 ; M.E 1907
*Strachan, Daniel, B.A. . ...... 1889
Strange, John, B.A., 1877 ; LL.B. 1883
Stratton, C. M., M.D. . . . . . ... 1902
Struthers, W. E., B.A... .. ..... 1905
*Stuart, James G., B.A. . .. .... 1876
Stuart, Irwin, B.A.. .. . . . . .... 1870
Stuart, Wm. A., B.A., 1888; M.D. 1891
Stubbs, S. J., B.A.
*Sturgeon. Robert J., B.A.
Sullivan, D. V., B.A., 1890 ; M.D.
Sullivan, J. F.,. B.A.. . . .. ....
Sullivan, J. H., M.D..............
Sullivan, Hon. Michael, (Prof., Queen's Univ.) M.D. . ..... 1858
Sullivan, Thomas, M.D.......... 1863
Sullivan, William, B.A.. .. ..... 1862
Sully, L. K., B.A................. 1906
Supple, J. A., B.A.
Sutherland, Bruce, M.D.
Sutherland, E., B.Sc, 1902; M.D. 1906
Sutherland, J. C., B.A.. .. .... 1901
Sutherland, R. C., M.D.

1907

1907 New Westminster, B.C.

1899

1899

1906
1895 Camrose, Alta.
1894 (Deceased.)
1892 Pittsburg, Pa.
1882 Chesley.
19 J 6 Staten Island Hosp.
1907 Waba.
Douglas.
Pt. Aux Trembles, Que.
Toronto.
Chicago, Ill.
Cornwall.
DuBois, Pa.
Meaford.
St. Thomas.
Evarts, Alta.
Hamilton.
Aylmer H. S.
Ottawa.
Ottawa.

Ely, Minn.
Brockville.
Kingston.
Napanee.
Lanark.
London.
(Deceased.)
Clarenceville, Que.
Smith's Falls H. S.
Angus.
(Deceased.)
Ottawa.
Peterborough.
Kingston.
(Deceased.)
Kingston.
Ottawa.
Pembroke.
Kingston.
Montreal, Que.
Richmond, Que.
Montreal.

## Date of

Name.
Sutherland, Robert, B.A. . . . . . . 1852
7Swanson, W. W., M.A. . . . ... 1905
Sweetland, John, M.D. . . ...... 1858
Switzer, Wilson I., M.D. . . . . . 1862
Symmes, C. R., M.D. . . . . . . . . 1903
*Symonds, H., D.D. . . . . . . . .. 1901
Symington, Thomas J., M.D.... 1881
Tandy, H., B.A., 1900; M.D.... 1904
*Tandy, W. R., M.A.... . . .... 1899
Tarbell, Horace S., B.A. . . . . . . 1862
Tassie, William, LL.D. . .. .... 1871
Taugher, W. J., M.D. . . . ..... 1906
Taylor, James, M.D. .
1864
Taylor, John A., B.A. 1892
Taylor, Mabel A., B.A. . . . .. .. 1903
Taylor, William F., M.D.
Hamilton.
Teepel, Etson W., M.D. . . . . . . . 1896
Templeton, C. P., M.D
1906
Tennent, R. W., M.D
1905
3, (b) Teskey, Kathleen, B. A., 1903; M.A.

1904
Theal, George McC.. LL.D. . . . . 1895
Thibaudeau, P. H., B.A.. . . ... 1903
Thibodo, Augustus J., B.A., '51; M.A.

1854
Thibodo, Francis H., M.D.. ... 1895
Thibodo, Oliver, M.D. 1857
Thibodo, Robert, B.A., '62; M.D. 1862
Thibodo, Wm. B., B.A., '62 ; M.A. 1865
Thirkell, William G., M.D.. ... 1861
Thompson, A. M., M.A.. .. ... 1902
Thompson, A. Y., B.A. . . . .... 1903
Thompson, E. J., M.D. . . . . . . . 1901
Thompson, Edna G., B.A.. :. .. 1903
*Thompson, George, B.A.. .. .. 1863
*Thompson, George M., B.A.... 1878
Thompson, Hiram B., M.D. . ... 1888
Thompson, John, B.A. . . . . . .. 1855
*Thompson, John R., B.A., 1865 ; M.A.

Thompson, Lottie, B.A.. .. .... 1903
Thompson, Maggie J., B.A. . ... 1894
Thompson, P. M., M.A. . . .... 1899
*Thompson, Thomas J., M.A.... 1895
Thompson, William B, M.D..... 1892
Thompson, William McC., B.A.. 1888
Thomson, J. P., F.R.S.G.S., LL.D
Thorburn, John, LL.D
1903
Thorburn, John, LL.D.. . . .. .. 1880
Address.
(Deceased.)
Chicago, Ill.
(Deceased.)
(Deceased.)
Aylmer, Que.
Montreal.
Camlachie.
Box 539, Parry Sound.
(Deceased).
(Deceased.)
Beachburg.
(Deceased.)
Wingham.
Brisbane, Queensland.
(Deceased.)
New York.
Belleville.
Essex.
Cape Town, Africa.
I.P.S., Lacumbe Dist.

Niagara Falls, N. Y.
(Deceased.)
Rat Portage.
Sodus, N. Y.
Brockville.
Strathroy.
Kingston.
Kingston.
Scotland.
Glasgow, Scotland.
New London, Conn.
(Deceased.)
(Deceased.)
Picton.
Almonte.
Chatham.
Stratford.
Brooklyn. N. Y.
Dunbar, N. S.
Brisbane, Australia. Ottawa.

## Date of

Name.
Thorne, Stephen H., M.D Graduation.

1887 Bobcaygeon. 1897 Ottawa.
Thorntoll, L. A., B.A., 1906; B.Sc.

Thornton, Thomas H., M.D
1906
Thornton, William H., M.D
Tilman, Herbert A., M.D.
Tilman, Harry G., M.D.
Timm, W. B., B.Sc................ 1906
Tinkess, A. L., M.D.
1898
Tod, A. S., B.A
Todd, Alpheus, C.M.G., LL.D 1906

Todd, Samuel G., M.D.
Tompkins, Louise H., B.A.
1881
Towpen, 1904
Townsend, Harland W., B.A.... 1887
Tracey, Robert, M.D
Tracey, Thomas B., M.D
*Trotter, Thomas, (President of Acadia University) D.D.

1862
1865
1903
Trousdale, James D., M.D. . ... 1860
Truscott, S. A., M.A
1904
Tudhope, M. B., B.A.
1897
Turnbull, Agnes M., M.D. . . 1892
*4Turnbull, James H., M.A.
Turnbull, John, M.D.
1896
Turner, John B., B.A.
1905
Turner, Adelaide, M.D.
1889
Turner, N. L., M.A.
1897
Tuttle, Henry E., M.D
1907
Tuttle, Leslie, M.D.
1892
Twitchell, E. G., M.D.
Tyner, W. G., B.A., 1898; M.D 7 Uglow, W. L., B.A., 1905 ; M.A
*Ure, Robert. D.D.
1875

Urquhart, J. R., B.A.
116 Usher, W. C., M.A
Valleaur, Archibald J M.......... 1906
$\begin{array}{ll}\text { Valleau, Archibald J., M.D. . . . . } & 1891 \\ \text { Valleau, George Z., M.D. . . . . } & 1867\end{array}$
Van Allen, John R., M.D. . .. .. 1871
Van Dusen, E. M., B.A............ 1906
Van Ness, C. S., M.D.
Van Vlack, Gilbert J.. M.D... .... 1869
Vaux, M. Lillian, (MacKinnon) M.A.

Vercoe, $\mathrm{F} . \ddot{\mathrm{H}} ., \ddot{\mathrm{B}} . \ddot{\mathrm{A}}$
Voaden, A., B.A.
11a, 14Voaden, J., M.A.
Volume, D. A., B.A.

1904

1903
1900
1906
1906
1901
1906
1876
1907
1906
1867

1903
1898

Peterboro, Ont.
Consecon.
(Deceased.)
Kingston, Jamaica.
Racecourse P.O., Vere, Jamaica.
Westmeath.
Plessis, N. Y.
Maguire, Ont.
(Deceased.)
Meshawaka, Ind.
Chesley.
(Deceased.)
Belleville.
(Deceased.)
Wolfville, N. S.
(Deceased.)
Sydenham.
Orillia.
(Deceased).
Ottawa.
Lowville.
Hamilton.
New York.
Hamilton.
Chases' Mills, N. Y.
Tweed.
Burlington, Vt.
Picton.
Kingston.
(Deceased.)
Kingston.
Wicklow.
Wolcott, Vt.
(Deceased.)
Far Rockaway, L.I.
Wolfe Island.
(Deceased.)
Halifax, N.S.
(Deceased.)
St. Thomas.
Niagara Falls.
Rose Bank, Man.

Date of
Name.
Waddell, W. H., M.D
Wade, J. J., M.D
Wade, Robert J., M.D
Wade, Wm. R., M.D. . . . . . . . 1888
Wafer, Francis M., M.D. . . . .. 1867
Wagar, C. M., M.D. . ... . . . . 1905
Wager, Ephraim N., M.D
1897
Waldren, H. M., M.D.. .. . . . . 1898
Walkem, Wm. W., M.D. . . . . . . 1873
Walkem, R. K., B.A. . . . . . . . . . 1902
Walker, Allen H., M.D. . . . . ... 1867
*Walker, Andrew, B.A.. . . .... 1901
Walker, Archibald D., M.D. . .. 1888
Walker, A. J., B.A.
1907
Walker, C. Wesley, B.A.. .. ... 1902
Walker, H., M.D. . . . . . . . . . . 1897
Walker, Hattie A., M.D. . . . .... 1890
Walker, H., B.A., 1902; B.Sc... 1904
*Walker, James, B.A.. .. .. ... 1894
Walker, Stanley, M.D. . . . . .. 1889
14, 9Walker, Thomas L., (Prof., Univ. of Toronto) M.A..... 1890
*Walkinshaw, Wm., B.A., 1890; M.D

1893
Walks, R. H., B.A. . .. ........ 1900
*Wallace, Alexander, B.A... ... 1847
Wallace, David, M.D. . . . . . ... 1881
17*Wallace, H. T., B.D. . . . ... 1906
*2, 6, 17 Wallace, James, M.A.,'98;
B.D.

1901
Wallace, O. S. C., LL.D. . . . . . 1903

- Wallbridge, Asa F., B.A. . . . . . 1854

Ward, G. C. Tremaine, M.D.... 1879
Ward, G. H., M.D. . . . . . . . . 1903
Ward, Henry, B.A. ................ ... 1905
Ward, W., B.A. . . . . . . . . .. 1903
Wardlaw, James S., M.D. . .. .. . 1888
*Wardrope, Thomas, D.D.. .... 1878
Warner, Albert F., M.D. . . . ... 1887
Warren, F. R. H., B.A., 1900 ; M.D

Warren, J. W., M.D.............. 1905
Warren, L. A. H., (Lecturer, Queen's University), M.A.. 1902
Wartman, Philander G., M.D... 1864
Waters, John F., B.A.. .. .. .. 1884
Watson, Alice R., B.A. . . . ..... . 1902
Watson, Andrew, B.A. .

Name.
Watson, Charles V., M.D. . . . . . 1863
*Watson, David, B.A., 1850 ; M. A., 1852; D.D. . .. .. .. ... 1886

Watson, Donald, B.A. . .. .. .. 1851
Watson, E. C., M.A., 1895 ; M.D. 1899
Watson, G. A., B.A. . . . . . .... 1904
*Watson, James S., B.A. . . . . . . 1895
*Watson, Peter, B.A. . . . . . ... 1852
*Watt, W. J., B.A., 1905 ; B.D. . 1907
Watts, Ezra J., M.D. . . . . . ... 1886
*Watts, J. R., B.A., 1901; B.D. . 1904
Watts, Thomas E., M.D. . . . .. 1890
Way, Hon. Samuel J., (Lieut.Gov. and Chief Justice, South Australia) LL.D.
Way, W. C., B.Sc., 1905; M.Sc.
Weatherhead, G. F., B.A., 1898; M.D.

Webster, A. R., B.Sc. . . . . . .... 1904
Webster, B. E., B.A., 1895 ; M.D. 1896
Webster, Charles R., B.A. . . . . 1891
Webster, James, B.A. . . . . . . . 1857
Webster, George R., B.A. . .... 1875
Webster, W. J., M.D. . . . . . . . . 1884
Weekes, W. J., M.D. . . . . . . . . . 1865
Weese, Willametta, B.A..... .... 1903
Weir, Janet, M.D. . . . . . . . . . . . 1891
Weir, William, M.D. . . . . . .... 1861
11; bWells, E. J., B.A. . . . .... 1903
Wells, James Walter, B.Sc.. ... 1898
Wellwood, J. A., B.A., 1901; M.D 1903
Westlake, Henry W., B.A. . .. 1882
Wheeler, James W., M.D.. .. .. 1892
White, Albert N., M.D. . . . . . . . 1885
White, H. T., B.A. . . . . . . . . . . . 1907
White, James W., M.D. . . . .... 1891
White, Joseph F., B.A. . . . . . . . 1877
White, Lizzie R. (Leslie), B.A.. 1895
Whitehead, Jas., B.A. . . .... 1907
Whiting, C. C., M.A., 1902; B.D. 1905
Whitney, Arthur W.. M.D. . ... 1888
Whitney, J. P., (Premier of Ontario), LL.D
*Whiteman, Richard, B.A.. .... 1886
Whitteker, Walter C., M.D... . . 1895
Whyte, William M., B.A. . . . . . 1896

Beaverton.
(Deceased.)
Detroit.
Toronto.
Minnedosa.
(Deceased.)
Walkerton.
Moose Creek.
Mansewood.
Natural Bridge, N.Y.

1895 Adelaide, South Aus.
1906 Montreal, Que.
Winniyeg, Man.
Turbine.
Kingston.
Kingston.
(Deceased.)
(Deceased.)
Ottawa.
Penibroke.
Merrickville.
(Deceased.)
(Deceased.)
Cobalt.
Eden, Man.
Cornwall.
Denver, Col.
Stratford.
Chicago, Ill.
Shanty Bay, Ont.
Kingston.
Rosemount.
Rosebank, Man.
St. Paul, Minn.
Toronto.
Avonmore.
Pakenham.

Date of

Name.
Wight, L. S., B.A
Wilgar, W. P., B.Sc
*Wilkie, William D., B.A. . .. .. 1891
Wilkinson, A. T., B.A.. .. .. .. 1904
Williams, E. J. F., B.A., 1903 ; M.D.

1904
Williams, Herbert S., M.D. . ... 1884
Williams, Hugh G., M.D. . .. .. 1894
Williams, H. Sophia, B.A. . .... 1899
Williams, L. J., B.A............... 1906
Williams, Mary I., B.A.. . . ... 1904
Williams, W. H., M.A. . . . .... 1903
Williamson, A. R. B., B.A., 1895 ; M.A., 1896; M.D.

1899
Williamson, E. J., B.A., '98; M.A. 1900
Williamson, Florence, B.A.. ... 1905
Williamson, G. H., B.A... .. .. 1899
Williamson, H. J., B.A., 1901; M.D

1905
*Wills, Michael, LL.D. . .. .... 1861
Wilmer, G. H., B.A. . . . . . .... 1898
Wilson, Annie J., B.A. . . . . . . . 1904
Wilson, Arthur C., M.D. . . . ... 1891
Wilson, Caroline L. M., B.A.... 1890
Wilson, Charles J. C., M.D.. .. 1869
1Wilson, Harry L., (Prof., John Hopkins University) B.A., 1887 ; M.A., 1888 ; LL.D. . .. 1903
Wilson, Jessie A., B.A.. .. .... 1902
Wilson, John A., M.D.
1863
Wilson, J. H., B.A. . . . . . . . . . 1900
Wilson, J. L., B.A. . . . . . . . . . . 1901
*Wilson, Matthew H., B.A.. ... 1894
6Wilson, R. A., B.A., igoi ; M.A., 1902 ; Ph. D.
Wilson, Thomas, B.A., '77; M.D.
Wilson, T. A., M.D
*Wilson, T. R., B.A.
Wilson, W. A., B.A.
2Windel, Henry C., M.A., 1896; M.D.

Witheril, E. R., B.A.
Wood, H. S., B. A
9Wood, Isaac, (Prof., Queen's Univ.) B.A., 1884 ; M.A., 1891; M.D.

1892
Woodruff, G. A., M.D. . . . . . . . 1902
*Woods, I. H., B.A

1906
1880
1900
1897
1897
1902
1899
1905

Engineer, Transcon-
tinental Ry. Survey.
Needham, Mass.
Pincher Creek, Alta.
Brockville.
Vernon, B.C.
(Deceased.)
Watford.
Essex.
Berlin, Ont.
Kingston.
Kingston.
Kingston.
Fort William.
(Deceased.)
Rockspring.
Carp.
Perth.
Fleming, Assa.
Montreal.

Baltimore, Md.
Gananoque.
(Deceased.)
Smith's Falls.
Mountain.
Carleton Place.
Tara.
Port Essington, B.C.
Marathon.
Rat Portage H. S.
Kenmare, N. Dak.
Williamstown.
Peterborough.

Kingston.
Tavistock,

Date of
Name.
*Woods, S. A., B.A.
Woolsey, W. J., B.Sc. .
Workman, C. W., B.Sc.
Workman, H. C., B.A............ 1906
Workman, J. K., B.Sc. . . . . . . . 1304
Workman, W., M.D. . . . . . . . . 1903
Wormwith, N. B., M.A. . . . . . . 1905
Wright, A., B.Sc.. . . . . . . . . . 1905
Wright, E. A., B.A.. ........ 1902
Wright, Edward W., M.D. . . . . 1886
wright, G. C., B.Sc. . . . . . . . . 1907
Wright, H. Mabel, B.A. . .. ... 1901
*W right, John J., B.A.
1885
Wright, Josephine, B.A. . . . . . . 1892
Wright, R. Ramsay. LL.D...... 1903
Wright, Thomas A., M.D. . .... 1888
Wylie, James, B.A.
1864
Yates, Horatio, M.D.. . . . . . . . . 1863
Yates, Octavius, M.D. . . . . . .. 1856
Yates, Daintry B., B.A.
1898
*Yeomans, Geo. A., B.A.. .. ... 1863
Yeomans, Horace P., B.A., '60; M.D.

1863
Young, Alexander, B.A.. .. ... 1895
*Young, Colin G., B.A. . . . ..... 1893
Young, Daniel, M.D. . . . . . . . . . 1862
Young, David, M.D. . . . . . . . . . 1871
Young, D. M., M.D. . .. ...... . 1906
Young, Frederick M., B.A., Judge 1886
Young, George P., LL.D. . . . . . 1882
Young, Henry E., B.A. . . . . . . . 1883
*Young, John, B.A., 1882 ; M.A. 1884
Young, J. M., B.A., 1902 ; M.D.. 1904
Young, M. R., B.A., 1897; M.D. 1901
*Young, Robert, B.A.. .. .. ... 1890
Young, Ward, B.A., 1896 ; M.D. 1898
Young, Sir Wm., Chief Justice,
LL.D.
Young, William A., M.D.. .. .. .. 1894
Young, William J., M.D.. . . . . 1883
Youngson, Mary, B.A. . .. .. .... 1893
Yourex, John McGill, M.D... .. 1876
Zwicker, F. G., M.D. . . . . . .... 1903
(Deceased.)
Westfield, Vt.
(Deceased.)
Kingston.
Lonsdale.
Halifax, N.S.

## ALUMNI.

The Registrar will be much obliged for notice of additions or corrections to this list.

Date of
First Registration. Address.
Abrey, James 1893 Granton, Ont.
Alexander, W. A. . . . . . .. .... 1893
Allen, Andrew. ..... 1884
*Allen, William F ..... 1882
Ailen, Mary (Menzies) ..... 1890
*Andrew, Joseph ..... 1879
Argue, Andrew W ..... 1888
*Black, W. G ..... 1891
*Bailie, Robert ..... 1889
Bain, W. J. ..... 1893
Bain, Wm. R. ..... 1858
Baker, W. R. ..... 189 ..... 189
*Ball, William Macpherson S.. ..... 1842

(Deceased.)
Barker, John. ..... 1897
*Barr, John ..... 1857
Barr, Isabel (McPherson)1890
Bamford, Frederick J. ..... 1876
Bawden, J. R. ..... 1855
Bell, J. W ..... 1893
Bell P. M. ..... 1894
*Bennett, James, B.A. ..... 1881
Bennett, Margaret. ..... 1896
Bentley, Carrie L., (Scott) ..... 1889
Bertram, Thomas. ..... 1880
*Best, D. W. ..... 1889

Beaverton.

London.
Bethune, Alexander ..... 1883
Bethune, James, K.C. ..... 1856 (Deceased.)
Bethune, William S 1879 Wingham.
Birch, Ada L. ..... 1895

Kingston.
*Black, William, B.A. ..... 1889 ..... 1898Blane, William.
Booth, Jackson C. ..... 1882

Ottawa.
Booth, John F. ..... 1833

Ottawa.
*Borthwick, H. J. ..... 1855
Boyle, Thomas. ..... 1884
Bradbury, Emily ..... 1892
Bradley, J ..... 1896
Bristol, Emily F. ..... 1886
Brown, P. W ..... 1896
Brownell, James E ..... 1877
Bruce, David A. J ..... 1885
Bruce, Edward W ..... 1886
Burger, Charles M ..... 1886
Burrows, Annie M ..... 1889

Balderson's Corners.
Denver, Col.
Beachburg.
Margaret, Man.
Stittsville.
Maple.
(Deceased.)
Elora.
Montreal.
Newburgh.
Somerbury, Sask.
(Deceased.)
Indianapolis.
Winnipeg.
Kingston.
Westbrook.
(Deceased.)
Omemee.
Shawinigan Falls, Que.
Dundas.

Arkansas.
Renfrew.

Morden, Man.
Gananoque.
Gananoque.
Peterboro.
Napanee.
Kingston.
Avonmore.
Toronto.
Hudson, Que.
Kingston.

| -325- |  |  |  |
| :---: | :---: | :---: | :---: |
| Name. | Date <br> First Regis |  | Addr |
| Burt, Ellen A. A. . . . . . . . . . . 1890 Caldwell. |  |  |  |
| Bute, J. H. | 1894 | Hou | Tex |
| Byers, D. R. | 1895 | Gan |  |
| *Byers, Henry. | 1848 | (De |  |
| Callaghan, Etta | 1888 | King |  |
| Calvin, H. A. | 1868 | Gar | slan |
| *Camelon, David | 1853 |  |  |
| Camelon, John M | 1885 | Chic |  |
| Cameron, Colin K. O | 1889 | Iroq |  |
| Cameron, Donald | 1888 | (De |  |
| Cameron, A. H., B.A. | 1869 | Nap | Ma |
| Cameron, John S | 1889 | Wel |  |
| * Cameron, Hugh. | 1856 | (De |  |
| * Cameron, J. J., M.A. | 1871 |  |  |
| * Campbell, Charles A. | 1887 | Stra |  |
| Campbell, John R. | 1879 |  |  |
| Campbell, Margaret A | 1895 | Smi |  |
| Cannon, J. D. | 1894 | Kin |  |
| Carey, M. | 1893 | Gan |  |
| Cargill, Henry | 1856 |  |  |
| *Carmichael, James, B.A | 1858 | (De |  |
| Carr-Harris, D. | 1893 | Kin |  |
| Carr-Harris, Mary A (Gunn) | 1893 | Cair |  |
| Carr-Harris, R. R. | 1896 | Hau | Ch |
| Carson, Joseph T. | 1891 |  |  |
| Cartwright, C. | 1894 | Kin |  |
| Cartwright, Madeline L. (Math | son) 1889 |  |  |
| Caswell, W. G. . . | .. 1896 | Car | Pl |
| Chambers, John N | 1875 | Wo |  |
| *Chambers, W. W | 1871 | Erz |  |
| Chisholm, G. W | 1895 | Tha |  |
| Chown, Susie | 1894 | Luc |  |
| Chown, Daisy | 1898 | Kin |  |
| Clapp, David P | 1873 | Har |  |
| Clarke, H. J. | 1893 | Bell |  |
| Clothier, James O | 1890 | Kem |  |
| Clow, C. N. . | 1895 | Lyn |  |
| Clune, Ella. | 1889 | Wa |  |
| Coleman, W. W. | 1886 | Seel |  |
| Cooke, Florence (Horsey) | 1893 | Shà |  |
| Cook, William. | 1858 | Que |  |
| Conklin, J. D. | 1894 | Win |  |
| *Connery, D. G. S., M.A. | 1890 | Tor |  |
| Cooper, E. G. | 1894 | Lan |  |
| Corbett, Charles H. | 1865 | Kin |  |
| Cotton, M. P.. | 1895 | Sas | n, S |
| *Crawford, Angus | 1869 |  |  |
| Creeggan, Alfred H | 1889 | Kin |  |
| *Currie, E. C. . . . . . . . | .. 1890 | Sar |  |

## Name.

Currie, P. W

Curtis, Guy
Curtis, Henry H ..... 1887
Dargavel, R. B ..... 1895
Day, Ila B. ..... 1898
Day, Lewis J ..... 1892
Devitt, H. ..... 1895
Dickson, Edwin H ..... 1867
Dix, O. J ..... 1895
*Dodds, James A. ..... 1886
*Doudiet, C. A ..... 1866 First Registration. Address.
Douglas, John J ..... 1881

Desbarats.
Delta.
Montreal.
Newboro.
Harrowsmith.
Cataraqui.
Easton's Corners.
Waco, Texas.
Kingston.
Alliston.
Montreal.
*Dow, James ..... 1882
Draffin, Isabel ..... 1895
Dresser, John A. ..... 1889
Drinnan, John K. ..... 1887
Drummond, Robert J ..... 1855Duff, John M.
Duff, John ..... 18501875
*Dunning, Harry N. ..... 1883
Ellicott, T. W. H ..... 1896
Elliott, E. G.
Elmore, Minor M ..... 1875
Emmons, John ..... 1887
*England, Luther M ..... 1890
Farnden, Hunter R ..... 1842
Farrell, Jennie (Dyde) ..... 1883
Fenwick, Effie L. ..... 1898
Fenwick, Chrissie, (Cra ig) ..... 1898
Ferguson, A. ..... 1895
*Ferguson, John, B.A. ..... 1858
Flanigan, John ..... 1858
Folger, Marion ..... 1884
*Forest, David ..... 1879
Fowler, Catherine G ..... 1893
*Fraser, John ..... 1888
Fraser, Marion ..... 1894
Fraser, Nutting S ..... 1881
Fraser, R. A. ..... 1894
Fraser, Francis H ..... 1883
Gahan, Percy A ..... 1886
Galbraith, Malcolm C. ..... 1853
*Gallup, E. C. ..... 1888
*Gandier, Joseph ..... 1866
Garret, William R ..... 1884
*Gerrior, John P. ..... 1884
Gibson, Arthur ..... 1897

Ottawa.
Richmond, Que.
Medicine Hat, Assa.
Perth.
Guelph.
(Deceased.)
Watertown, N.Y.
Montreal.
Kingston.
(Deceased.)
Shannonville.
Richmond, Que.
Kingston.
Ottawa.
Kingston.
Williamstown.
Maple Valley, Man.
Chicago.
(Deceased.)
Walton, Ont.
Kingston.
Indian Brook. St. Ann's, N.S.
L'Orignal.
St. John's, Nfld.
L'Orignal.
(Deceased.)
Windfall.
Bowmanville.
Saskatoon, Sask.
Newburgh.

Kingston.
Date of
Name.First Registration.Address.
Gibson, Sara ..... 1888
Gillies, John A ..... 1889
Girvin, H ..... 1896
Goodfellow, Joseph ..... 1891
*Goodwill, John ..... 1858
Goodwin, Antoinette E. ..... 1884
Goodwin, Ernest P ..... 1884
Gordon, Robert A ..... 1882
Gordon, W. B ..... 1893
Gowan, T ..... 1894
Graham, R. S ..... 1894
*Grant, H. R ..... 1889
Graves, F. M ..... 1894
*Gray, James M ..... 1861
Greaves, Jennie H ..... 1880
Grenfell, Marion M ..... 1898
Griffith, M. A ..... 1893
Hamilton, Clark ..... 1848
Hamilton, Duncan H. ..... 1886
Hamilton, John, Judge. ..... 1844
Hamilton, Max G ..... 1882
Hamilton, William ..... 1858
Harkness, Jefferson D ..... 1888
Head, John ..... 1884
Heal, G. E ..... 1896
Henderson, $\mathrm{N}_{1}$. ..... 1895
Hendry, Thomas ..... 1868
*Herald, Charles L ..... 1880
Hill, Annie G ..... 1890
Hobart, S. W ..... 1879
Hodgins, James C. ..... 1889
Hooper, John G ..... 1879
Hooper, Vere G ..... 1880
Honeywell, Ira E ..... 1890
Houston, Martha (Campbell) ..... 1889
Houston, Robert C. ..... 1890
Hutton, Maude ..... 1893
*Hyland, David ..... 1881
Ireland, Alexander H ..... 1866
Ireland, James O ..... 1850
Ireland. William. ..... 1850
Irvine, Richard W ..... 1878
Irving, Lilla B. (Farrell) ..... 1884
*Jack, Hugh ..... 1889
Tackson, Alfred R ..... 1889
Tackson, Nelson ..... 1883
Johnston, Ethel L ..... 1895
Johnston, William ..... 1878
Kingston.
Braeside.
Kingston.
Parham.
(Deceased.)
Studley, Halifax.
Cape Tormentine, N:B
Kingsford.
Kingston.
Elginburg.
Fernie.
Kingston.
Selkirk, Man.
Kingston.
Arnprior.
Balder, Man.
Kingston.
Milton.
Hudson Bay Co.
(Deceased.)
Kingston.
(Deceased.)
St. John's, Nfld.
Yorkton, Sask.
California.
Chicago.
Riviere du Loup.
Toronfo.
Toronto.
Teeswater.
(Deceased.)
Ottawa.
Kingston.
Toronto.
Barriefield.
(Deceased.)
Toronto.
Toronto.
Chatham.
Deseronto.
Utica, N.Y.

## S. Vancouver, B.C.

Kingston.
McLeod, Alta.
Date of
Name. First Registration. Address.
Jones, Alfred W. . .. .. .. .. .. 1888 Kingston.
Jones, Charles P.. .. .. .. .. .. 1887
Kean, Isabel H.. .. .. .. .. ... 1890
*Kellock, David.. .. .. .. .. ... 1878
Kemp, John W.. .. .. .. .. ... 1888
King, Mary A. (Marquis).. .... 1888
Kingsbury, H. C. W.. .. .. .... 1896
Kingston, E. A. . . . . . . . . . . . . . 1894
Kirkpatrick, Kathleen. . . . . . . . . 1897
Kirkwood, Daniel H... .... ... 1883
*Laing, Douglass.. .. . . .. ..... 1899
*Lamont, Hugh, D.D. . . . .. ... 1861
Lane, Morgan.. .. .. .. .. .. .. 1863
Lapsley, N. T. R. . .. . . .. . ... 1893
Larmer, Elizabeth E. . .. .. ... 1895
*Legere, Prosper L. . .. .. .. .. 1856
Lingwood, F. H. . .. .. .. .. .. 1895
Lindsay, Ethel M. . . . . . .. .... 1893
Lochead, H. S.. .. .. .. .. .... 1893
Mabee, G. E. . .. .. .. .. .. .... 1896
*Madill, James C. . .. .. .. .. .. 1889
Magee, R. W.. .. .. .. .. .. .. 1898
Malloy, William. . .. .. .. ..... 1865
Malone, Vida .. .. .. .. .. .. . .. 1893
Maudson, W. H. . .. .. .. .. .. 1894
Maxwell, John. . .. .... .. .... $188 \%$
Meade, H. . .. .... . ... . .. .. .. 1895
Menzies, A. D.. .. .. . . . . . . . .. 1888
Metcalfe, H. H. . . . . . . . . . . . . . 1893
*Miller, David. . . . . . . . . . .... 1884
Miller, Margaret D. . . . . . . . . . 1895
Mills, James McV.. . . .... . .... 1884
Minnes, James A.. .. .. .. .... 1885
Minnes, Ethel G. . . . . . . . . . . . 1895
Mohr, F. C. . . . . . . . . . . . .... 1895
Moodie, R. T. . . . . . . . . . . .... 1893
Moir, Robert . . . . . . . . . . . ... 1878
Moore, J. L. . . . . . . . . . . . . ... 1896
Motherill, James W.. . . . . . . .. 1873
Morton, Thomas P.. . . . . . . . . 1890
*Muckleston, W. J. . . . . . . . . .. 1864
*Mullin, Elias. . . . . . . . . . .... 1861
*Mullan, J. B. . . . . . . . . . . . . 185 b
*Mullan, J. S. . . . . . . . . . . . . . 1854
Mulock, William R. . . . . . . . . . 1865
Munro, Donald G. . . . . . . . . ... 1880
*Munro, G. . . . . . . . . . . . . . . . . . . . . . 1895
Murray, Elizabeth C.,(Turnbull) 1896
Murray, Thomas N. . . . . . . . . 1890

Kingston.
Orillia.
Kinnear's Mills.
Carp.
Saranac Lake, N.Y.
Roseham, P.Q.
Picton.
Kingston.
Kingston.
(Deceased.)
Clayton, Ont.
Toronto.
Millbrook.
(Deceased.)
Lakefield.
Centreville.
Port Hope.
Balmoral, Man.
Fort William.
Toronto.
Kingston.
Alton.
Nassagaweya.
Beachburg.
Kingston.
Winkley, Man.
Keene.
Elsinore.
Kingston.
Kingston.
Arnprior.
Perth.
Toronto.
(Deceased.)
Ottawa.
Perth.
Toronto.
Fergus.
Stanley, N.B.
Winnipeg.
Winnipeg, Man.
Blythewood, Ont.
Ottawa.
Coshocton, Ohio.
Name.
Macallister, Lachlin, M.D
Macdonald, H. JMacnee, Walter H
McArthur, Bessie ..... 1888
McArthur, Charles ..... 1879
*McArthur, Dugald O ..... 1890
McArthur, John M ..... 1878
Macaulay, J ..... 1895
McCaig ..... 1894
McConnell, Jennie M ..... 1898
McConville, Jane ..... 1895
McDonnell, Allen ..... 1885
*McDonald, Donald D ..... 1885
McDonald, Duncan ..... 1898
McDonald, P. D ..... 1896
McDougall, Archibald J ..... 1891
McDonald, Belle, (Boyd) ..... 1890
McDonald, William *McEachern, Charles ..... 1873
McEachern, Duncan ..... 1860
McEwen, Thomas ..... 1883
*McFayden, Allen L., B.A ..... 1887
McGeach, William, M.D ..... 1861
*McGillivray, Alexander ..... $18 \% 1$
McGregor, Alexander ..... 1862
McGregor, A. A ..... 1896
McIntosh, Hugh ..... 1876
McIntyre Andrew B ..... 1887
McIntyre, A. B ..... 1891
*McIntyre, C. E. ..... 1863
McKay, Daniel C. ..... 1889
*McKay, Norman T. C ..... 1883
McKenzie, John J
McKenty, D
McKerracher, Mary ..... 1896
*McKinnon, John ..... 1842
*McLarin, Archibald ..... 1878
McLean, Archibald B ..... 1865
McLean, A. E ..... 1895
McLean, A. L ..... 1895
McLean, Donald A ..... 1877
McLean, John ..... 1874
McLennan, Duncan L ..... 1887
Maclennan, John D ..... 1889
McLennan, Neil K ..... 1888
*McLeod, Alexander K
McLeod, Charles L ..... 1889
McLeod, Janey A. ..... 1894
*McMillan, George, B.A. ..... 1875
Date of18051894
First Registration. Address.
Duntroon.
Winnipeg.
Kingston.
Kingston.
Melrose.
Fruitvale, Cal.
Montreal.
Prescott.
Dresden.
Kingston.
Keene.
Admaston.
Ottawa.
Newburgh, N.Y.
Kingston.
(Deceased.)
Inverness, Scotland.
Sault Ste. Marie.
Chester.
Fingal.
Toronto.
Williamstuwn.
Williamstown.
(Deceased.)
Oshawa.
Kingston.
Port Stanley.
Gretna, Man.
Ottawa.
(Deceased.)
Springfield, Man.
Smith's Falls.
Williamstown.
Berwick.
(Deceased.)
Kincardine.
(Deceased.)
Middle River, C.B.Brighton.
Kingston.Kentville, N.S.
Date of
Name. First Registration. Address.
McNab, Frank ..... 1880
McNaughton, Alexander. ..... 1888
McNaughton, Alexander K. ..... 1887
*McNeil, John ..... 1880
McNutt, George A ..... 1878
McPherson, E. A. ..... 1896
*McPherson, Lachlin ..... 1842
MacRae, F. A. ..... 1894
McRae, J. F. ..... 1893
McRae, Philip K ..... 1888
McRossie, Allen ..... 1880
McRossie, Hattie (McCammon). ..... 1887
Nelson, John. ..... 1887
Nichol, C. O. ..... 1895
O'Connor, Edward J ..... 1888
O'Connor, W. J ..... 1894
O'Donnell, E. J. ..... 1893
Oronhyatekha, W. A. H ..... 1888
Osborne, N. A. ..... 1897
Ovens, Rufus K ..... 1879
Paine, Charles C. ..... 1889
Park, R. ..... 1894
Patterson. ..... 1897
*Paul, James T. ..... 1842
Penman, A. G. ..... 1902
*Percival, Herbert A. ..... 1886
Pollock, John R ..... 1877
Pooke, Margaret E. ..... 1896
*Porteous, George ..... 1854
Potter, J. S. ..... 1894
Powell, G. L ..... 1894
Pratt, Abraham A ..... 1879
Purdy, Mary E. F ..... 1886
Quincey, J. A. ..... 1898
*Rattee, Edward J., B.A ..... 1890
Rayside, J. S
Read, G. E ..... 1896
Renton, Lucinda J.
Renton, Thomas ..... 1879
Reynolds, Annie F. ..... 1894
Reynolds, Mary E. ..... 1894
Richards, Salt ..... 1883
Richardson, John ..... 1891
Riddell, Alexander F. ..... 1867
*Robertson, John ..... 1884
Robertson, John D ..... 1859
Roddick, James A. ..... 1887
Rose, Constance B ..... 189 ?
(Deceased.)
Manitoba.
Marcellus, N.Y.
Bayfield.
Prescott.
(Deceased.)
Big Baddeck, C.B.
Glen Robertson.
North River, C.B.
New York.
Bearbrook.
Binbrook.
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Deseronto.
Kingston.
Toronto.
Waterville, N.S.
Wilton.
Goderich.
Stella.
(Deceased.)
Penman \& Sprang, Toronto.
Mishawakena, Ind.
(Deceased.)
Perth.
(Deceased.)
Kingston.
Sutton West.

Thornby.
Princetown, P.E.I.
Rock Island, Que.
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Kingston.
Gananoque.
Gananoque.
Brockville.
Montreal.
Hopewell, N.S.
Tarrawonga, Vic.
Lyndhurst.
Ottawa.

Date of
Name.
*Rose, G. W
Ress, Irvine.
*Ross, Archibald.
*Ros, A 1 .
*Ross, Donald First Registration.

Address
*Ross, Hugh... .. .. . . . . . . . . . . .. 18 . 1884
Ross, K. J. Livingstone.
1879
Ross, Thomas B
1886
Roland, John S.
1889
Rowland, J. . .. .. .. ... ... .. ..... 1898
Roy, Henry.. .. .. .. . . .. . ... 1880
Ruttan, A. C. . . . .. .. .. .. ... 1895
Scammell, Gertrude.... ..... .... 1895
Scott, T. K... .. ..... .. .. .. .. .. 1897
Shanks, William J. . .. .. .. ... 1879
Sherlock, John M.. .. .... . .. .. 1879
Shirreff, Robert M. . .. .. .. ... 1893
Shurtleff, M.. .. .. .. .. .. ... 1895
*Shore, Godfrey. . .. .. .. .. . .. . 1881
Simpson, Hugh.. ... .. ... .. .. .. 1897
Simpson, W. H. S. . .. .. .. ... 1889
Sinclair, Jennie V.. .. .. .. .... 1887
Smith, A. F. . .. . . . . .. .. .... 1897
Smith, Clifford E. . .. .. .. .. .. .. 1893
Smith, Frederick.. .. .. .. .. .. .. 1852
Smith, James.. .. .. .. .. .. .. 1877
Smith, John. . .. .. .. .. .. ... 1897
Smith, John E.. .. .. .. .. .... 1889
Smith, Robert L. . .. .. ... .. .. 1879
*Smith, William S.. ... .. .. .. 1877
*Smith, Thomas G., D.D.. .. ... 1847
*Snodgrass, John A.. .. .. .. .. . 1868
Spear, R.. .. .. .. .. .. .. .. .. .. 1893
*Spencer, Hugh J. . .. ..... .. .. .. 1889
Spottswood, M. G.. ... .. .. .. 1894
Steen, Henrietta.. .. .. .. .. .. 1888
Steers, Cherry (Primrose)... .. 1893
Stewart, Alexander S.. .. .. ... 1878
Stewart, Daniel.. .. .. .. .. .. ... 1883
Stewart, James A.. .. .. .. .... 1892
Stewart, R. . .. .. .. .. .. .. .. .. 1893
Stewart, R. T.. .. .. .. .. .. .. .. 1895
Stewart, William R.. .. .. .. .. 1887
*Strachan, Donald... .. .. .. ... 1865
Strange, O. S., M.D. . .. . . . . . . . . 1842
Sullivan, P. H.. . . . . . . .. ...... 1893
Swales, Olive. . .. .. .. ... .. .. 1892
Swets, Florence E. . .... .. . . ... 1893
*Sym, F. Petry. . .. ... . . . . .... 1884
*Taft, J. N. . .. ... .. .. .. .. .. .. 1877

Mono Centre.
(Deceased.)
New York.
Seattle.
Corbetton.
Seattle.
Winnipeg, Man.
Toronto.
Montreal.
Chisholm, P.E.I.
Kingston.
Iron Bridge, Algoma.
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Toronto.
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Glenburnie.
(Deceased.)
Orono.
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Brockville.
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Toronto.
Renfrew.
Arnot.
Appleton, Wis.
(Deceased.)
(Deceased.)
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Cobourg.
Chicago.
Farran's Point.
New York.
(Deceased.)
(Deceased.)
Carleton Place.
Bluevale.
Mitchell.
Notre-de-Laus, Que.
Guelph.
(Deceased).
Kingston.
Montreal.
(Deceased.)
Brooklyn, N.Y.
Date of
Name.
Taggart, RobertTandy, R. H. Norma ( $\mathbf{W}$ ililiam-son)1896
*Taylor, Hugh ..... 1873
Telgmann, Henrich B. ..... 1887
*Thom, Leslie W. ..... 1877
Thomas, Henry P. ..... 1882
Thompson, Andrew W ..... 1879
*Thompson, Archibald, B.A. ..... 1890
Topliffe, Annie (Lapp) ..... 1891
Tracy, Thora D., (McIlroy) ..... 1897
Tripp, J. H. ..... 1894
Twitchell, Marshall C. ..... 1887
Van Blaricom, George B ..... 1889
Varcoe, George F. ..... 1886
Wagner, W. G ..... 1894
Waldron, Edward W ..... 1889
Walkem, Hugh ..... 1875
Walkem, Walter C. A.. ..... 1886
*Wallace, Robert ..... 1842
Ward, David. ..... 1850
Ward, Marjory ..... 1889
Watson, Angus R ..... 1885
Welch, Frederick ..... 1867
White, Mary H., (Cosgrove) ..... 1893
Whyte, W. M. ..... 1893
*Wilkins, T. W., B.A. ..... 1863
Wilkie, Isabella ..... 1896
Williams, A. S. ..... 1896
Wilson, Daniel A. ..... 1886
Wilson, Samuel. ..... 1888
Witheril, Ebenezer ..... 1889
Wright, Henry A. ..... 1879
Young, J. A. ..... 1894
Young, E. T ..... 1895
Young, John G. ..... 1892
Young, William ..... 1886
Yourex, Edmund L ..... 1887Kingston.
Loch Winnoch.New York.Flesherton.Belleville.
(Deceased.)
Hepworth, Ont.
Glenvale.
Ottawa.
Fitzroy Harbour.
Burlington.Peterborough.Fenelon Falls.
South Bend, Indiana.
Kingston.
Spence's Bridge, B.C.(Deceased.)
(Deceased.)
Almonte.
Renfrew.
Kingston.
Stratford.
Pakenham.
Trenton.
Carleton Place.
Newmarket.
Kingston.
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## ENDOWMENT OF CHAIRS AND TUTORSHIPS.

In 1888, William Nickle, Esq., Kingston, gave the sum of $\$ 2,500$ to found "The William Nickle Tutorship in Mathematics."

In 1892, Hugh Waddell, Esq., South Monaghan, gave the sum of $\$ 2,500$ to found, in memory of his father, "The Robert Waddell Tutorship" in Physics or Natural Science.

In 1893, John Roberts, Esq., Ottawa, bequeathed the sum of $\$ 40,000$ to the University. In recognition of his generosity, the Irustees resolved that the Chair of Animal Biology should bear his name, and that the Chair of Botany should bear the name of John Roberts Allen, his executor.

In 1892, the Hon. Senator Gowan gave a contribution to be the nucleus of an endowment for a Chair of Political and Economic Science to bear the name of the late Right Hon. Sir John A. Macdonald, and added to it from time to time till in 1898 it amounted to upwards of $\$ 5,000.00$. The Trustees then issued an appeal for the object to the friends of the great statesman, and this resulted in increasing the sum available to nearly $\$ 22,000$. It was then decided to found the Chair, and Professor Adam Shortt was made the first occupant and at the same time he was relieved of the charge of the library and Miss Lois Saunders was appointed Librarian at a salary of $\$ 400$. On April 30th, 1899, the Sir John Chair was formally established, Sir Charles Tupper, Bart, M.P., pronouncing the oration in honour of his old leader, in the City Hall on that day.

The late Dr. Williamson prepared for "Doomsday Book" a history of the first fifty years of the University. He has given an account of the Fun's raised at different times for general or special purposes during this period, with the names of subscribers, down to the Jubilee Fund of 1887-90. When the history is completed, an abridgement with a sketch of the different Funds and the principal contributors will be published in the Calendar.

On Thanksgiving Day, 1906, John Charlton, Esq., of Lynedoch, Ont., gave $\$ 50,000$ to endow the Chair of Moral Philosophy in Queen's University. This Chair will henceforward be known as the John and Ella G. Charlton Chair of Moral Philosophy.

ARTS PASS PAPERS.

# Queen's University, Examinations : April, 1907. 

## Junior Latin.

[N.B.-Candidates are required to reach the necessary pass standard in each section. In section $A$ answers must be confined to one prose and one verse author. In this paper $u$ stands for both $u$ and $v\rceil$.

## Section A.

## I. Cicero, De Senectute.

I. Translate :
(a) Est istud quidem, Laeli, aliquid, sed nequaquam in isto sunt omnia ; ut Themistocles fertur Seriphio cuidam in iurgio respondisse, cum ille dixisset non eum sua, sed patriae gloria splendorem adsecutum : 'Nec hercule,' inquit, 'si ego Seriphius essem, nec tu si Atheniensis, clarus umquam fuisses.

Account for the mood and the tenses of essem and fuisses.
(b) Ego L. Metellum memini puer, qui, cum quadriennio post alterum consulatum pontifex maximus factus esset, uiginti duos annos ei sacerdotio praefuit, ita bonis esse uiribus extremo tempore aetatis, ut adulescentiam non requireret.

Account for the tense of esse. Explain the meaning of pontifex maximus.
(c) Quattuor robustos filios, quinque filias, tantam domum, tantas clientelaś Appius regebat et caecus et senex ; intentum enim animum tamquam arcum habebat nec languescens succumbebat senectuti. Tenebat non modo auctoritatem, sed etiam imperium in suos; metuebant serui, uerebantur liberi, carum omnes habebant ; nigebat in illa domo mos patrius et disciplina.

Explain fully the meaning of clientelas.
2. Tell what you know of either:
(a) The principal speaker in De Senectute, or,
(b) The lex Voconia.

## II. Livy. Book I.

[Extra-mural students may substitute $2(b)$ for $2(a)$ ].

## I. (a) Translate :

Priusquam inde digrederentur, roganti Mettio, ex foedere icto quid imperaret, imperat Tullus, uti iuuentutem in armis habeat; usurum se eorum opera, si bellum cum Veientibus foret. ita exercitus inde domos abducti.

Princeps Horatius ibat trigemina spolia prae se gerens. cui soror uirgo, quae desponsa uni ex Curiatiis fuerat, obuia ante portam Capenam fuit ; cognitoque super umeros fratris paludamento sponsi, quod ipsa confecerat, soluit crines et flebiliter nomine sponsum mortuum appellat. mouet feroci iuveni animum conploratio sororis in uictoria sua tantoque gaudio publico. stricto itaque gladio simul uerbis increpans transfigit puellam. ,,abi hinc cum inmaturo amore ad sponsim" inquit, ,,oblita fratrum mortuorum uiuique, oblita patriae. sic eat quaecumque Romana lugebit hostem."
(b) Account for all the subjunctives.
(c) Account for the case of se, opera, domos, cui, paludamento, iuueni.
2. (a) If Livy's account of the Regal Period is not history, of what value is it? Illustrate your points by referring to the text which you have read.
[Alternative question for Extra-mural Students].
(b) What were the spolia opima? In whose temple were they kept? How does Livy account for the title of the god?
III. Horace, Odes, Books I and II.
I. (a) Translate :

O Diua, gratum quae regis Antium,
Praesens uel imo tollere de gradu
Mortale corpus, uel superbos
Vertere funeribus triumphos:
Te paluper ambit sollicita prece
Ruris colonus ; te dominam aequoris,
Quicumque Bithyna lacessit
Carpathium pelagus carina.
Te Dacus asper, te profugi Scythae,
Urbesque, gentesque, et Latium ferox,
Regumque matres barbarorum, et
Purpurei metuunt tyranni.
Iniurioso ne pede proruas
Stantem columnam, neu populus frequens
Ad arma cessantes ad arma
Concitet, imperiumque frangat.
(b) Explain fully the meaning of gratum, praesens, mortale corpus, lacessit, ferox, stantem columnam, cessantes.
(c) Give a short analysis of the Ode beginning " Parcus deorum cultor.'
IV. Vergil, Aeneid. Book VI.
I. (a) Translate :
,,Gnosius haec Rhadamanthus habet durissima regna,
,,"Castigatque auditque dolos, subigitque fateri,
,,Quae quis apud superos, furto laetatus inani,
,,Distulit in seram commissa piacula mortem.
,,"Continuo sontes ultrix accincta flagello
,,Tisiphone quatit insultans, toruosque sinistra
,,Intentans angues, uocat agmina saeua sororum.
,,Tum demum horrisono stridentes cardine sacrae
,,"Panduntur portae. Cernis, custodia qualis
,"Vestibulo sedeat, facies quae limina seruet?
,,Quinquaginta atris immanis hiatibus Hydra
,Saeuior intus habet sedem ; tum Tartarus ipse
,,Bis patet in praeceps tantum tenditque sub umbras,
,,Quantus ad aetherium caeli suspectus Olympum.
(b) Account for the case of furto, sororum, uestibulo, hiatibus.
(c) Explain anything noteworthy in the construction of the following :

Tu quoque magnam
Partem opere in tanto, sineret dolor, Icare, haberes.
What do you known of Icarus?
(d) How did Aeneas find the golden bough, and what use did he make of it?

## Section B.

I. (a) Give the 2nd Pers. Sing. of the Pres. Subj. of $e o$ and of volo; the 2nd Pers. Sing. of the Future Indic. Passive of do and of fero ; the Present and Perfect Infinitive Passive of pello.
(b) Compare multus, malus, acriter, and give the Genitive and Accusative Plural of iter, ignis, uis.

## 2. Turn into Latin :

(a) I should not be writing to you at such length on this subject if you were at Rome.
(b) He was persuaded to attack the city by destroying the walls.
(c) Can you tell me who the writer of this letter is?
(d) To Caesar's demands the German king sent the following answer : "I dare not go without an army into that part of Gaul which you possess, and I cannot collect my troops without a great deal ot trouble."
(e) During the siege of Saguntum, Hannibal while incautiously (incaute) approaching the walls was struck by a javelin and fell from his horse. This caused such a panic among the Carthaginians that for nine days they did nothing but construct new siege works. On the tenth day Hannibal's wound was healed (use sanare) and a general assault was ordered, with the result that within a few hours a breach was made in the wall.

## 3. Translate :

Cum Volscorum gente Latino bello neque pax neque bellum fuerat: nam et Volsci conparauerant auxilia, quae mitterent Latinis, ni maturatum $a b$ dictatore Romano esset, et maturauit Romanus, ne proelio uno cum Latino Volscoque contenderet. hac ira consules in Volscum agrum legiones duxere. Volscos consilii poenam non metuentes necopinata res perculit. armorum immemores obsides dant trecentos principum a Cora atque Pometia liberos: ita sine certamine inde abductae legiones.

# Queen's University Examinations : April, 1907. 

## Senior Latin.

[N.B.-Candidates are required to reach the necessary pass 'standard in each section. In section $A$ answers to questions on the prepared books mnst be confined to three authors].

## Section A.

I. Terence, Adelphi.

## I. Translate :

Video eos sápere, intellegere, ín loco
Veréri, inter se amáre : scire est líberum
Ingénium atque animum : quó uis illos tú die
Reddúcas. at enim métuas, ne ab re sínt tamen
Omíssiores paúlo. o noster Démea,
Ad ómnia alia aetáte sapimus réctius;
Solum únum hoc uitium adfért senectus hóminibus :
Adténtiores súmus ad rem omnes, quám sat est :
Quodillós sat aetas ácuet. Dre. Ne nimiúm modo
Bonaé tuae istae nós rationes, Mício,
Et túos iste animus aéquos subuortát. Mr. Tace :
Non fíet. mitte iam ístaec ; da te hodié mihi :
Expórge frontem. De. Scílicet ita témpus fert :
Faciúndumst. ceterum égo rus cras cum fílio
Cum prímo luci ibo hínc. Mr. De nocte cénseo :
Hodié modo hilarum fác te.
2. (a) What did Julius Caesar mean when he called Terence a "halved Menander" ( $O$ dimidiate Menander) ?
(b) Mention any three constructions found in the Adelphi which are not used in classical prose.
II. Vergil, Aeneid. Book X,
I. Translate the followiug passages :
(a) Ac uelut optato uentis aestate coortis

Dispersa immittit siluis incendia pastor ;
Correptis subito mediis extenditur una
Horrida per latos acies Volcania campos ;
Ille sedens uictor flammas despectat ouantes :
Non aliter socium uirtus coit omnis in unum Teque iunat, Palla.

Comment on optato.
(b) Dextra mihi deus et telum, quod missile libro,

Nunc adsint! Voueo praedonis corpore raptis
Indutum spoliis ipsum te, Lause, tropaeum Aeneae.
Explain fully the meaning and the significance of these lines. By whom were they uttered?
2. Comment on the following constructions :
(a) Caput puer detectus honestum.
(b) Fidite ne pedibus.
(c) Cuperem ipse parens spectator adesset.
(d) Animus patiens pericli.

## III. Livy. Boor V.

## I. Translate :

Placuit.... flamen sacerdotesque Vestalis sacra publica a caede, ab incendiis procul auferre, nec ante deseri cultum deorum quam non superessent qui colerent. Si arx Capitoliumque, sedes deorum, si senatus, caput publici consili, si militaris iuuentus superfuerit imminenti ruinae urbis, facilem iacturam esse seniorum relictae in urbe utique periturae turbae.

Explain the words printed in italics. Account for the tense of esse. Turn the last sentence into Oratio Recta.
2. Explain fully the meaning of:
(a) Iam ludi Latinaeque instauratae erant.
(b) Prodigia procurata fuerant.
3. What were the tribuni militares consulari potestate? How and when did the office originate?

IV. Cicero, De Offciis. Book III.

I. Translate :

Vtile uidebatur Vlixi, ut quidem poëtae tragici prodiderunt -nam apud Homerum optimum auctorem talis de Vlixe nulla suspicio est-sed insimulant eum tragoediae simulatione insaniae militiam subterfugere uoluisse. Non honestum consilium, at utile, ut aliquis fortasse dixerit, regnare et

Ithacae uiuere otiose cum parentibus, cum uxore, cum filio. Vllum tu decus in cottidianis laboribus et periculis cum hac tranquillitate conferendum putas? Ego uero istam contemnendam et abiciendam, quoniam quae honesta non sit ne utilem quidem esse arbitror. Quid enim auditurum putas fuisse Vlixem, si in illa simulatione perseuerauisset? qui cum maximas res gesserit in bello, tamen haec audiat ab Aiace :-

Cuius ípse princeps iúris iurandí fuit, Quod ómnes scitis, sólus neglexit fidem, Furere ádsimulare, né coiret, institit. Quod ni Palamedi perspicax prudentia Istíus perspexet málitiosam audáciam, Fidé sacratae iús perpetuo fálleret.
2. Answer one of the following, not both:
(a) Mention the subject of each of the three books of the De Officiis. What reason or reasons led Cicero to write so many works on philosophical subjects? What method did he pursue in writing them?
(b) What do you know of media officia, Peripatetici, Phalaris, Gyges?

## V. History and Literature.

[Only two questions to be answered].
I. Sketch the life of Cicero. Into what main divisions do his works fall?
2. What do you know of Maecenas? How did he influence Latin literature?
3. Comment on Livy's use of earlier authorities.
4. Mention some of the leading characteristics of Vergil's poetry, and illustrate your remarks, as far as possible, from the tenth book of the Aeneid.
5. Who were the plebeians? In what ways did they diminish the power and privileges of the patricians between 509 and 390 B.C. ?
6. Give a short account of Caesar's campaigns in Gaul and Britain.
7. What do you know of the following : Clodius, Lex Manilia, the first and second Triumvirates, Cicero's Philippics?
8. What political and constitutional reforms were introduced by Julius Caesar between 49 B.C., and his death?

## Section B.

## I. Translation at sight :

Non mehercule criminis augendi causa dicam, iudices : sed, quem ipse accepi oculis animoque sensum, hunc uere apud uos, et, ut potero, planissime exponam. Nam, cum quadriennio post in Siciliam uenissem, sic mihi affecta uisa est, ut hae terrae solent in quibus bellum acerbum diuturnumque uersatum est. Quos ego campos antea collesque nitidissimos uiridissimosque uideram, hos ita uastatos nunc ac desertos uidebam, ut ager ipse cultorem desiderare ac lugere dominum uideretur. Aetnensis uero ager, qui solebat esse cultissimus, et, quod caput est rei frumentariae, campus Leontinus, sic erat deformis atque horridus, ut in uberrima Siciliae parte Siciliam quaereremus.

Cicero, In Verrem, III., 46, 47.

## Composition.

## 2. Translate into Latin :

At the departure of Joan the city was filled with the discordant shouts of the men and the weeping of the women. Many old men and matrons escorted her as far as the second milestone, commending their sons to God and to the leader who seemed to have been chosen by Him to liberate their beloved country. One writer declares that as the gallant maiden rode in her armour amid her faithful followers, far more distinguished than a triumphing general drawn by white steeds through the streets of Rome, her face seemed to change, and no one doubted that she was seized with divine inspiration.

## Queen's University Examinations : April, 1907.

## Junior Greek.

(A Pass is required in Greek prose composition.)
I. Translate :










 à $\nu \rho$ о́́тогऽ.


(c) Account for the case of $\pi 0 \lambda \varepsilon \mu i(\omega \nu, \pi \rho o ́ \sigma \omega \pi \sigma \nu$, and the mood of $x o \mu i \zeta \varepsilon^{\prime} \nu$.
(d) Show where the point of Lucian's satire lies in his reference to Menelaus, Odysseus, Pythagoras, Socrates, and Plato.

## 2. Translate :











 $\delta \varepsilon \sigma \mu \delta \nu \ddot{\eta}$ Өа́ $\nu \alpha \tau о \nu$.
(b) Parse $\pi \rho \cup \tau \alpha \nu \varepsilon \dot{\sim}$ ova $\alpha$.

Explain the use of sous before and after

Account for the use of $\mu \eta^{\circ} \delta^{2} \nu$ and state with reasons the subject of $\delta \varepsilon \tau \nu$ and of $\delta \kappa \alpha \times \iota \nu \nu \nu \varepsilon \cup \varepsilon \varepsilon \iota \nu$.
(c) What is meant by the eiocuveio of Socrates?
3. Turn into Greek :
(a) The Government sent for this man with the intention of putting him to death.
(b) They said that if he had happened to be present, they would have ordered him not to make this accusation against me.
(c) I know that those men are so cowardly that they will not attack me till after dark.
(d) When we arrived at this island we disembarked and learing Scintharus on board we went in search of water. We found it without difficulty and immediately returned to the shore. Here we found Scintharus lying on the ground asleep. We poured some of the water over him and then a wonderful thing happend. The water did not fall but rose into the air and became a cloud.
4. Translate :


 $\chi \rho \tilde{\eta} \sigma \theta \alpha c \cdot \pi \alpha, \alpha \alpha \delta o \dot{\nu} \tau \varepsilon, \delta^{\prime} \alpha_{\nu} \tau \alpha \tilde{\nu} \tau \alpha$ каi $\tau \tilde{\omega} \nu \quad \sigma \omega \mu \dot{\alpha} \tau \omega \nu \quad \sigma \tau \varepsilon \rho \eta-$







Queen's University Examinations : April, 1907.

## Senior Greek.

## I. Translate:



























2. Scan lines 285, 286 above.

Parse $\dot{\lambda} \lambda \varepsilon ́ \alpha \sigma \vartheta \alpha \iota, \pi \varepsilon \varphi \iota \delta \partial i \mu \not \neg \nu, \delta \alpha \varepsilon i \omega$.

Supply the context (in English) to the first passage. What has Homer in common with ballad poetry?
3. Translate :

























4. What are the scientific principles upon which Thucydides proceeds in writing history? Give a brief account of the siege of Syracuse.
5. Translate : Philippians, chap. Iv., verses $1-5$.






 $\chi$ аі́ $\rho \tau є$.
6. Translate :














Menander.
7. Describe shortly either the reforms of Cleisthenes or the Parthenon, the general scheme of the temple and its meaning.
8. N.B.-A Pass cannot be granted unless a proportion of marks is obtained on this question.

## Turn into Greek :

It would be unsafe to condemn this action, not knowing, as yet, the bottom of it.

He used to hold that revolutions do not hinge upon slight issues, though they often spring from slight occasions.

Terrible meanwhile was the agony of contending feelings, the native forces being ambitious of adding to their glory, and the invaders apprehensive of still further calamity. The alarm of the Athenians indeed was without a parallel, for their entire fortunes were staked upon their ships. The spectacle was near at hand, and their minds were more deeply affected by their view of the engagement than those of the actual combatants. Owing to the protracted and indecisive nature of the conflict they were in a miserable condition; for they were constantly within an ace of escape or destruction. Very similar was the case of those on ship board, until the Syracusans routed the Athenians and pursued them to the shore. Then the army ran to succour the ships, while others began to deliberate how they should provide for their own safety.

# Queen's Unirersity Examinations: April, 1907. 

## Junior German.

Note.-The required standing must be made in the different parts of the paper.
I.

## I. Translate into German :

(a) When Gluck found that Schwartz did not come back, he was very sorry, and did not know what to do. He had no monev, and was obliged to go and hire himself (sich vermiethen) again to the goldsmith, who worked him very hard, and gave him very little money. So, after a month or two, Gluck grew tired, and made up his mind to go and try his fortune with the Golden River. "The little king looked very kind", thought he. "I don't think he will turn me into a black stone". So he went to the priest, and the priest gave him holy water as soon as he asked for it. Then Gluck took some bread in his basket, and the bottle of water, and set off very early for the mountains.
(b) You reproach me with obstinacy, but what right have you to do so. It would be folly if I were to utter those silly words, and it would be debasing to commit such a folly. And yet this is what you so imperatively demand. Do you call that love? Do you think you are giving me a proof of your love in insisting so obstinately on your foolish request ? You see how it hurts me, how it wrings tears, but all the same you insist on having your own way, although my whole being revolts against compliance. I have given you all reasonable excuses, but in vain. Tell me if you have for a moment tried to please me.
(c) When I was sick, a girl came into the house, with whom I fell in love.-She drew a letter from the pile, which was very different from the others.- Love makes a fool of the wisest, says the proverb.-Shall I have a glass of wine brought for you? Will you not sit down?-Hold out your finger for me to put the ring on.-That serves her right.-He said that he should not have done that.

## 2. Antworte man auf Deutsch :

(a) Warum konnte die Prinzessin nicht weinen? Welche Versuche machte man vergebens sie zum Weinen zu bringen? Wie geschah es, dass sie endlich weinte?

## 3. Antworte man auf Deutsch :

Was war die Weltesche? Wer waren die Nornen? Wer die Zwerge ? die Riesen ?

## II.

## Translate :

I. Darüber ging die Sonne unter. Ich war durch ein Dorf gekommen, dessen Namen ich nicht weiss, und hatte dort ein halbes Glas Wein getrunken, da es mich doch fröstette in meinem leichten Mantel und der Februarwind lebhafter wurde, als einem verwöhnten Meraner Wintergaste behaglich ist. Mehr und mehr wurde mir unheimlich, im Zwielicht auf der öden Landstrasse so ganz einsam hinwandernd und ich sah mich oft um, ob nicht was käme und mich mitnähme." Ein Stellwagen hatte mich überholt, der aber voll rauchender Bauern sass uud nicht einladend aussah. Und als ich noch eine gute Stunde so hingegangen war und auch Hunger litt, setze sich die Heldin, die so feste Entschlüsse in der Brust trug, wie ein anderes verirrtes Kind aus einen Stein am Wege und weinte ganz tapfer in ihr Taschentuch hinein. Ach ja, Sterben ist leicht, aber Leben schwer!
2. Wie die grossen Erdmassen im ganzen, so unterliegen auch wieder die einzelnen Teile einer Verschiebung und Veränderung ihrer ursprünglichen Lage. An einzelnen Punkten muss es zu einem Ausgleich des übermässigen Druckes kommen, und dort werden nun die Massen entweder zusammengeschoben und emporgehoben, oder auch es hat sich Platz gebildet, um ein Zusammenbrechen und Versinken einzelner Sochichten zu ermöglichen. In beiden Fällen bilden sich Unebenheiten auf der Erde, die uns als Gehirge entgegentreten.
3. Give equivalents in (a) German, (b) English for :
Er war dir gar nicht grün.-So viel an mir liegt, soll geschehen.-Ich bitte gar schön, flüsterte sie.-Ich habe mir Wunder was eingebildet.-Und es ist ein leideg Ding, allein zu tafeln.-Die Stimmen werden jetzt sehr einzeln zu Protokoll gegeben.-Bei dem werde ich mir auch keinen Toast holen.

## III.

I. (a) Discuss the unity of action in the ,,Journalisten", and (b) show how Heyse brings harmony out of discord in ,,Vetter Gabriel ".
2. How does Freytag show his political sympathies in the ,,Journalisten' ${ }^{\text {? }}$
3. State what you would consider the nearest approach to the improbable in ,, Vetter Gabriel, " and show whether and how Heyse has succeeded in avoiding this charge.
4. Point out any existing traces of the ancient German mythology, and indicate the connection.

Queen's University Examinations : April, 1907.
JUNIOR GERMAN.

## Dictation.

Da sprach der liebe Gott zu der Schlange : ,, Weil du das gethan hast, so sollst du verflucht sein und sollst, so lange du lebst, auf dem! Bauche kriechen und Erde essen müssen." Und zur Eva sprach der liebe Gott : ,,Du sollst viel Schmerzen haben in deinem Leben, und dein Mann soll über dich Herr sein. "

Von dieser Stunde an durften auch der Adam und die Eva nicht mehr in dem schönen Paradiese bleiben. Der liebe Gott trieb sie selbst hinaus auf das Feld. Dort mussten sie von früh bis abends arbeiten, dass sie schwitzten, wenn sie nicht verhungern wollten. Da mochte der Adam und die Eva wohl manchmal so im stillen denken :,,Ach, hättet ihr doch der alten Schlange nicht gefolgt. Hattet ihr doch nicht von dem Baume gegessen, da könntet ihr noch in dem herrlichen Paradeise sein 1 's ist doch nicht gut, wenn man dem lieben Gott nicht folgt!"-Aber nun war's zu spät!-Sie konnten nicht wieder in den schönen Garten zurück, denn der liebe Gott hatte einen Engel vor den Eingang gesteilt. Der Engel hielt ein grosses, scharfes Schwert in der Hand und liess sie nicht wieder hinein.

Queen's University Examinations: April, 1907.

## Senior German.

Note.-The requisite standing in all parts of the paper must be made.

## I.

## I. Translate into German :

(a) There once lived in a town of Persia two brothers, one named Cassim and the other Ali Baba. Their father divided a small inheritance equally between them. Cassim married a very rich wife, and became a wealthy merchant. Ali Baba married a woman as poor as himself, and lived by cutting wood, and bringing it upon three asses into the town to sell.

One day, when Ali Baba was in the forest, and had just cut wood enough to load his asses, he suw at a distance a great cloud of dust, which seemed to approach him. He observed it with attention, and distinguished soon after a body of horsemen, whom he suspected might be robbers. He determined to leave his asses to save himself. He climbed up a large tree, planted on a high rock, whose branches were thick enough to conceal him, and yet enabled him to see all that passed without being discovered.

The troop, who were to the number of forty, all well mounted and armed, came to the foot of the rock on which the tree stood, and there dismounted. Every man unbridled his horse, tied him to some shrub, and hung about his neck a bag of corn which they brought behind them.
(b) Excuse me for not writing you a letter.-He told her how his aunt had not wanted to dispense with him for a mo-ment.-I had to study chemistry and after a year pass a stiff examination in it.- -He took leave of her with the most composed tone that he could command.-You may wear the ring, or lay it by, as you please.-He made the best of a bad job.
2. Write in German a composition on the character of Hermann, or Hauke Haien, or Gabriel.

## I. Translate :

(a) Da wurde es noch stiller. Die vielen tausend Stimmen, das Leben, Regen und Rufen, das sonst die Luft auch dieser Einsamkeit erfüllt, hielt an sich. Die Vögel hielten sich lautlos in der Nähe der Häuser; die Krähen flogen stumm zu ihrer Nachtherberge. So sehr bangte und verwunderte sich die Natur. Die Menschen, die sonst auf das beständige Rauschen, das durch die ganze Natur geht, nicht achten, verwunderten sich jetzt, da es verstummt war. Wenn zwei zusammen des Weges gingen, standen sie still, sahen sich an, blieben stehen, hoben die Einger und sagten leise : ,,Hör' hoch !"
(b) Eine solche Wirkung setzt als Ursache nicht nur höchste Energie der Wahrnehmung und des Gedächtnisses voraus: wir müssen uns das Genie, welches dies leistet, gänzlich den Tatsachen hingegeben denken, gewahr werdend, beobachtend, sein Selbst ganz vergessend und verwandelnd in das was es erfasst. Unwillkürlich muss ich an Rankes Wort denken : ich möchte mein Selbst auslöschen, und die Dinge sehen, wie sie gewesen sind.
(c) So sind wir im raschen Fluge von dem ältesten Urzeiten bis zur Jetztzeit durchgedrungen, von der Herrschaft jener unförmlichen Krebstiere, der Trilobiten, bis zur Herrschaft des Menschen, und haben den langsamen aber steten Entwicklungsgang verfolgt, der sich durch die ganze Erdgeschichte durchzieht und seinen Gipfelpunkt in der Jetztzeit und dem Menschen findet.
2. Give equivalents $(a)$ in German, $(b)$ in English:

Und was bis dahin nicht zu Stande kommt, ist ein für alle mal aus und vorbei. - Was mich betrifft, so ist das meine Sache.-Er hat zugegriffen; hernach merkt er vielleicht, dass er sich vergriffen hat.- Und Hauke setzte alles daran, um jetzt den Schluss herbeizuführen.-Und Ann' Grethe konnte nicht lassen, ihrem Wirt Gehorsam zu leisten.

## III.

Note.-Answers preferred in German.
I. (A) Wie entsteht die Dissonanz in (a), ,Vetter Gabriel's, (b) ,,Dem Schimmelreiter's? Wie wird sie in beiden Fällen zur Harmonie? ( $B$ ) Vergleiche man kurz beide Werke betreffs der Verkettung von Ursache u. Wirkung.
2. (a) Was war in der germanischen Mythologie die Weltesche? Wer wohnten am Brunnen an einer ihrer Wurzeln und womit waren sie beschäftigt? (b) Wo steht der Eschenbaum im ,,Schimmelreiter"? Bei welchen Gelegenheiten kommt er zum Vorschein und warum? Gibt's noch Spuren von der alten Mythologie in diesem Werke?
3. Wie vertritt Dorotheas früherer Bräutigam den liberalen, Hermann den konservativen Idealismus? Auf welcher seite steht Gœethe?
4. Verweise man auf Stellen in ,,Hermann u. Dorothea", wo (a) das Dramatische, (b) das Lyrische vorherrscht.
5. Was ist die Kant-Laplaceische Theorie über die Entstehung der Erde u. der anderen Planeten?
6. Welche Ansichten werden in der Hochzeitsreise verfochten? Oder,
7. Was sind Genussvermögen, Produktionsvermögen?

Queen's University Examinations : April, 1907.
SENIOR GERMAN.

## Dictation.

Einmal wolite der Vater Jakob seinem Goldsohne, dem Joseph, eine rechte Freude machen und kaufte ihm einen wunderschönen roten Rock. Die anderen Brüder aber bekamen keinen.-Als nun Joseph diesen roten Rock zum erstenmale anhatte und die Brüder sahen ihn darin, ärgerten sie sich fürchterlich und wurden ganz böse auf den Joseph. Sie konnten ihn gar nicht mehr ersehen und redeten kein freundliches Wort mehr mit ihm.

Joseph benahm sich aber auch oft recht thöricht gegen sie. Eines Tages kam er zu ihnen hinaus auf das Feld und sagte: ,,Hört, kommt 'mal her. Diese Nacht hat mir etwas Merkwürdiges geträumt, das muss ich erzählen : Mir träumte, wir -ihr und ich-bänden zusammen Garben auf dem Felde. Da auf einmal richtete sich meine Garbe auf und stand kerzengerade dort. Eure Garben aber standen um die meinige herum und neigten sich vor meiner Garbe."

# Queen's University Examinations : April, 1907. 

## Junior French.

## [All students must attempt D].

A.

## Traduisez en anglais.

(a) Il vit là des ivoires jaunis datant du quinzième siècle, de rares émaux de Limoges, d'un gris bleu, des faiences marquées authentiquement du chiffre de Henri II, des échiquiers chinois ciselés avec patience : ici des plats de faïence de Rouen, grands comme des rondaches; là de toutes mignonnes boittes d'ivoire, pointillées de cuivre incrustré; puis des porcelaines de la famille Vase, à rehauts d'or.
(b) Il n'y d'impossible qu'un refus de ta part; la circonstance est si importante pour moi! J'ai une première représentation, mon cher ; ceci te surprend, c'est tout naturel ; je t'ai jusqu' à présent caché mon secret.
(c) Le plus heureux des hommes serait celui qui, possédant la science de son labeur, et travaillant de ses mains. puisant le bien-être et la liberté dans l'exercice de sa force intelligente, aurait le temps de vivre par le coeur et par le cerveau, de comprendre son oeuvre et d'aimer celle de Dieu.
(d) Le fermier ne se souciait pas d'engager la partie ; il voulut frapper de son bâton les mains du laboureur pour lui faire lâcher prise; mais Germain esquiva le coup, et, lui prenant la jambe, il le désarçonna et le fit tomber sur la fougère, où il le terrassa quoique le fermier se fût remis sur ses pieds et se défendit vigoureusement.
(e) Mais du tout! Dès que je serai de retour vous pourrez faire instrumenter.

Armand. Qu'est-ce que vous dites de cela ?
Daniel. Que voulez-vous! c'est de la veine!
Les éperons n'y sont pour rien . . . . . c'est la bête qui est ombrageuse.

Comment? Par le premier convoi, et vous bifferez vousmême, de bonne grâce les deux méchantes lignes échappées à votre improvisation.

## B.

## Answer briefly the following questions:

(a) What views did Georges Sand hold on the influence of country life on human character ?
(b) Wherein lies the charm of Muguette's character?
(c) Account for the name "La main malheureuse.
(d) Explain the nature of the humour of "La Grammaire."
(e) Discuss the part played by Majorin in "Le Voyage de M. Perrichon."

## C.

Ces questions sont à répondre en français et en peu de mots.
(a) Donnez quelques adjectifs qui se placent toujours devant le substantif.
(b) Quand se sert-on de l'Inversion en français?
(c) Quelles sont les principales terminaisons féminines?
(d) Pourquoi se sert-on des accents en français?

## D.

Translate into French.
Instead of knowledge she possessed taste. She could not say why such and such a picture was valuable; but the natural gift of taste she possessed to such a degree that her judgement never erred ; the impression produced on her by any work of art at once revealed to her the degree of its perfection. Her uncle was pleased to develop in her this feeling for beauty; but unfortunately the lessons she received from the broker had to come to an end with her holidays. There was a great difference between her loungings in the curiosity-shop and her active life at the farm ; yet the memory of the beautiful things she had seen at her uncle's was never effaced.

Queen's University Exammations: April, 1907.

## Junior French:

## Dictation.

## Personne et Moeurs de Charlemagne.

Charles était robuste de corps ; sa grandeur était justement sept fois la longueur de son propre pied. Il avait la tête ronde, les yeux vifs, le nez un peu plus long que la moyenne, le cou court et épais, et la figure franche et animée; sa démarche était ferme, sa voix claire, mais un peu grêle pour sa corpulence.

Sa santé était excellente ; mais pendant les quatre dernières années de sa vie il fut souvent pris, d'une fièvre intermittente; et il boitait d'un pied. Quoi qu'un peu gros, il avait de la dignité princière assis ou debout.

Il savait nager mieux que personne. Il aimaità monter à cheval et à chasser dans les grandes forêts des Ardennes tout près d'Aix.

Queen's University Examinations : April, 1907.

## PASS.

## Senior French.

[Part A and B (3) should be attemptêd by all candidates].
I. Translate into French :

It is bitterly cold-More and more-Near each other-On the other hand-By degrees-I say it is-Seven or eight years old-Too early-One of them-About sixty-Writing materials.
2. Translate into English :

La veille-La vieille-Ressembler à autant de nègres-Il fait une nuit atroce-Tiens!-A fleur de terre-Il en sera quitte pour un coup d'épée-Va ton train.

## 3. Translate into French :

According to several high authorities it is extremely doubtful if any student, however diligent, can learn to speak a foreign language in less than five years, that is to say, five years residence in the country where it is spoken. As a matter of fact I once met an old lady, who had lived five and twenty years in Germany and had simply forgotten her English without being able to learn German. We ought not then to be astonished or feel discouraged when six months' study-often of a very poor quality-fails to give us much knowledge of French or German. Another point worth noticing is that, especially in French, the more one knows of the language, the harder it seems to become, as we gradually discover shades of meaning and delicacies of expression that we never used to dream of. Even the very slightest acquaintance with the language can only be gained by habits of close observation, and at the same time by continual practice.

## B.

I. Form French sentences illustrating the following French Syntax.
(a) Conditions.
(b) Agreement of Past Participle of Reflexive Verbs.
(c) The Subjunctive.
(d) Use of Past Anterior.
2. Discuss briefly the comedy in "Le Gendre de M. Poirier. "
3. What do you know of:-The Troubadours. French Academy. Pascal. Rousseau. The date of the Romantic Movement. Balzac. Langue d'Oïl.

## C.

Translate into English, ascribing each extract to its author.
(1) Il s'avoua qu'il avait commis une action extrême et blâmable ; qu'on ne lui eût peut-être pas refusé ce pain s'il l'avait demandé; que dans tous les cas il eût mieux valu l'attendre, soit de la pitié, soit du travail ; que ce n'est pas tout à fait une raison sans réplique de dire : peut-on attendre quand on a faim? que d'abord il est très rare qu'on meure littéralement de faim; ensuite que, malheureusement ou heureusement, l'homme est ainsi fait qu'il peut souffrir longtemps et beaucoup, moralement et physiquement, sans mourir; qu'il fallait donc de la patience ; que cela eût mieux valu même pour ces pauvres petits enfants; que c'était un acte de folie, à lui, malheureux homme chétif, de prendre violemment au collet la société tout entière.
(2) De tous côtés, se prolongeant aux montagnes, mille bruits fugaces, un infini chuchotement d'où montaient des rires, des colères. D'innombrables feux scintillaient, et de longues fumées les enroulaient de halos d'azur, s'évanouissaient dans la nuit qui se faisait plus odorante mais plus froide. C'était l'heure de la soupe.

Dans le carré des grenadiers de la Garde, surtout, les voix éclataient avec force. On avait pillé Lerma; d'énormes gigots de mérinos enfilés à des baionnettes rôtissaient au feu,-mais le régiment était debout, et des hommes sans peur, l'habit orné de la croix, tête nue et farouches, braillaient le long des flammes.
(3) Aucune loi n'a pu abolir le duel et peu de gens en France, surtout les femmes, sont disposés à condamner un homme, quel que soit son crime, s'il n'a pas eu peur. Prise en masse, la nation française n'en est pas moins d'humeur pacifique et fort débonnaire. Mais que Bonaparte monte à cheval, elle est capable de le suivre jusqu'au bout du monde.

Bravoure ne signifie pas endurance. La bravoure française est surtout faite d'impétuosité. Une tension trop prolongée des nerfs amène bientôt chez les Français, plus que chez toute autre nation, quelque crise redoutable.

Queen's University Examinations, April, 1907.

## Senior French.

## Dictation.

Le Fleuve tari.
Il y avait un. berger qui gardait les chameaux d'un village au bord d'un lac. Un jour, en abreuvant son troupeau, il s'aperçut que l'eau du lac fuyait par une issue souterraine et il la ferma avec une grosse pierre, mais il y laissa tomber son bâton de berger. Quelque temps après, un fleuve tarit dans une des provinces de la Perse. Le sultan, voyant son pays menacé de la famine par le manque d'eau pour les irrigations, consulta les sages de son empire ; et sur leur avis, il envoya des émissaires dans tous les royaumes environnants pour découvrir comment la source de son fleuve avait été détournée ou tarie. Ces ambassadeurs portaient le bâton du berger que le fleuve avait apporté. Le berger se trouvait à Damas, quand ces envoyés y parurent; il se souvint de son bâton tombé dans le lac ; il s'approcha et le reconnut entre leurs mains; il comprit que son lac était la source du fleuve, et que la richessee et la vie d'un peuple étaient entre ses mains.- "Que fera le sultan pour celui qui lui rendra son fleuve ?" demanda-t-il aux envoyés.- "Il lui donnera," répondirentils, "sa fille et la moitié de son royaume."- "Allez donc," répliqua-t-il, "et avant que vous soyez de retour, le fleuve perdu arrosera la Perse et réjouira le cœur du sultan."

Le berger ôta la grosse pierre, et les eaux, reprenant leur cours par ce canal souterrain, allèrent remplir de nouveau le lit du fleuve. Le sultan envoya de nouveaux ambassadeurs avec sa fille à l'heureux berger, et lui donna la moitié de ses provinces.

Queen's University Examinations: April, 1907.

## Scientific French.

## -SECOND YEAR.

## Translate the following extracts into English :

(a) Poirier-Je n'y reviens que pour mémoirc...Je reconnais que j'ai eu tort d'imaginer qu'un gentilhomme consentirait à s'occuper comme un homme, et je passe condamnation; mais, dans mon erreur, je vous ai laissé mettre ma maison sur un ton que je ne peux pas soutenir à moi seul; et puisqu'il est bien convenu que nous n'avons à nous deux que ma fortune, il me paraît juste, raisonnable et nécessaire de supprimer de mon train ce qu'il me faut rabattre de mes espérances. J'ai donc songé à quelques réformes que vous approuverez sans doute.

Gaston-Allez, Sully! allez, Turgot!... coupez, taillez, j'y consens! Vous me trouvez en belle humeur, profitez-en!

Poirier-Je suis ravi de votre condescendence. J'ai donc décidé, arrêté, ordonné.

Gaston-Permettez, beau-père : si vous avez décidé, arrêté, ordonné, il me paraît superflu que vous me consultiez.
(b) La galvanisation a pour but de prolonger la durée des objets fragiles ou oxydables en les recouvrant d'une couche métallique assez mince pour ne pas altérer la pureté des lignes et la délicatesse des détails, et cependant assez résistante pour les mettre complètement à l'abri des causes d'altération ou de destruction venant de l'extérieur. Il est superflu d'ajouter que lorsqu'ils ne sont pas conducteurs de l'électricité, on leur communique cette propriété en les plombaginant, après quoi on les place dans la dissolution métallique en les suspendant à l'électrode négative. C'est ainsi qu'on revêt d'une pellicule d'or ou d'argent des statuettes et des vases de plâtre ou de bois, des fruits, des fleurs, jusqu' à des cadavres. C'est également au moyen du même procédé que, depuis plusieurs années, on soustrait aux ravages de l'oxydation les statues, les fontaines et les autres monuments de fonte qui décorent les places publiques, en les recouvrant d'une couche continue de cuivre rouge, ce qui constitute le cuivrage galvanique.
(c) Il arrive souvent, au reste, que les réactions sont plus compliquées que ne semble l'indiquer la décomposition du carbonate de cuivre, car l'analyse d'un corps peut être accompagnée de la synthèse d'une autre matière, et une des expériences que nous connaissons le mieux nous offre un exemple de ces deux opérations simultanées: lorsque nous préparons l'hydrogène, nous faisons de l'eau, nous la décomposons en ses éléments, mais du même coup nous faisons la synthèse du sulfate d'oxyde de zinc.
(d) On apprend aujourd'hui aux écoliers et même aux écolières, à tous les degrés de l'enseignement, "un peu de chimie : on leur donne, tout au moins, les premiéres notions de la nomenclature chimique. Après avoir énuméré les corps simples, métallö̈des et métaux, on en vient aux corps composés : et dans la foule innombrable de ces corps composés, on établit tout d'abord trois groupes principaux, trois catégories distinctes: les acides, les bases et les sels. On prend soin de définir ces trois "fonctions chimiques" qui se rencontrent au seuil même du domaine nouveau. Cette manière de classer les corps est ancienne: les noms des groupes le sont aussi, et l'apprenti chimiste pourrait être tenté de croire que ces définitions essentielles, fondamentales, sont faites ne varietur, qu'elles sont aujourd'hui ce qu'elles étaient hier et ce qu'elles seront demain.

Il s'en faut de beaucoup. Les définitions des acides, bases et sels ont notablement changé au cours des temps. Les acides par exemple furent d'abord des oxydes des métalloïdes, c'est-a-dire des composés de l'oxygène dont le nom conserve la trace de cette erreur, le mot voulant dire, en grec " $j$ 'engendre les acides." Aujourd'hui, les acides ne sont plus définis comme des composés de l'oxygène mais comme des composés de l'hydrogène.

Queen's University Examinations: April, 1907.

## Scientific French.

## THIRD YEAR.

## Translate the following extracts into English :

(1) Le mot équilibre résume toute la théorie du vélocipède. Mais cet équilibre ne s'acquiert qu'au bout d'un certain temps; on ne parvient à le posséder, à manier cette monture, qu'après quelques tâtonnements, quelques exercices que l'on peut résumer ainsi :

Il convient de chosir une grande route bien unie et ayant une légère pente, au sommet de laquelle on place le vélocipède, de manière à ce qu'il ait, devant lui, une carrière en pente de vingt à trente mètres. Alors, on serre le frein, on enfourche l'instrument, on saisit des deux mains les deux extrémités du gouvernail, en laissant pendre les jambes de manière à ce que l'extrémitè du pied touche presque la terre. Puis on desserre le frein et on laisse le vélocipède franchir doucement l'espace en pente qu'il a devant lui, sans changer de position. Lee véhicule avancera d'abord avec une vitesse insignifiante, qui s'accroîtra en raison de la longueur du chemin franchi, mais qu'il sera toujours possible de réduire en serrant le frein.
(2) A moins d'une révolution possible, mais inattendue, dans les procédés de production directe de l'énergie électrique par affinité chimique, il ne semble pas que la pile puisse jamais constituer un générateur de grande puissance véritablement industriel.

La transformation de l'énergie thermique ou chaleur en énergie électrique constitue un problème séduisant en théorie, non résolu encore en pratique. Il semble, en effet, tout à fait illogique, au premier abord, de brûler du charbon sous une chaudière ou du gaz dans un moteur, d'utiliser cette vapeur ou ce gaz à la production d'un travail mécanique et de transformer ce travail mécanique en énergie électrique. Ne serait-il pas plus simple et plus économique de brûler ce charbon ou ce gaz dans un génératur approprié, une pile thermoélectrique, et d'en obtenir directement l'énergie électrique? Dans l'état actuel de nos connaissances, l'expérience répond catégoriquement: Non. C'est au travail mécanique que l'on s'adresse aujourd'hui presque exclusivement pour la production industrielle de l'énergie électrique.
(3) Il y a donc dans les êtres vivants deux choses, la forme et la vie. C'est cette formule même "la Forme et la Vie" qu'un naturaliste très pénétrant, M. F. Houssay, donnait pour titre, il y a quelques années, à l'ouvrage remarquable dans lequel il a su faire tenir le monde animal envisagé sous ses divers aspects. La formule résume bien, en effet, tout l'animal, l'être vivant tout entier. La première notion que nous ayons des animaux, c'est celle de formes visibles, individuellement discernables et reconnaissables. Elles sont, de plus, très diversifiées de l'une à l'autre, du chien à l'oiseau, au poisson, au ver, à l'huître.

Tout le monde sent en outre, et plus ou moins vaguement, que ces êtres ont quelque chose en commun par quoi ils se ressemblent entre eux et diffèrent des objets inanimés ; mais il est aussi difficile d'expliquer en quoi consiste cet attribut commun qu'il est facile, au contraire, de décrire la figure, la taille, la couleur, c'est-à-dire les qualités de la forme visible.

L'histoire naturelle s'est longtemps bornée à cette dernière tâche. Elle se contentait de la considération des formes, soit extérieures, c'est-à-dire d'aspect, soit intérieures, c'est-à-dire de structure : l'être vivant était décrit comme un édifice, dont on représente d'abord l'élévation en une sorte de tableau; puis, au moyen des plans et des coupes, la distribution des parties et l'armature ou charpente. La zoologie, la botanique ont été surtout des sciences anatomiques ou morphologiques, c'est-d̀-dire attachées exclusivement à la description des formes.

Ce n'est que plus tard qu'a pu être abordée l'étude des inexprimables qualités dont l'ensemble forme le quid commune, le fonds commun de l'animalité : et cette préoccupation répond à la création d'une science nouvelle, la physiologie générale, avec son annexe, l'anatomie générale.

Queen's University Examinations : April, 1907.

## Scientific French.

## FOURTH YEAR.

## Translate into English the following extracts :

(1) Les expérimentateurs avaient jusqu' à présent deux procédés d'investigation à leur disposition dans l'étude des localisations cérébrales : $1^{\circ}$, l'extirpation de la portion du cerveau dont on veut déterminer la fonction, extirpation suivie d'une suppression ou d'une altération profonde de la fonction; $2^{\circ}$, l'excitation directe, électrique ou chimique, de la substance nerveuse, excitation, qui, pour certaines régions déterminées de la substance cérébrale, donne lieu à des mouvements limités à un petit nombre de muscles, soit du membre antérieur, soit du membre postérieur, soit d'une autre portion du corps.
(2) Repos chimique. - Une première étude des conditions dans lesquelles s'accomplissent les changements chimiques semble révéler l'impossibilité de classer et de relier ces conditions. Les réactions peuvent être produites dans des circonstances les plus diverses : variation de pression, de température, d'état électrique ; rayonnement lumineux, calorifique, ou chimique; choos, frottements et autres actions mécaniques, etc. Il n'est pas jusqu' aux phenomènes de la vie qui ne déterminent des transformations, et les organismes les plus simples en apparence, tels que les ferments, ont cependant un effet chimique puissant.
(3) Pour achever l'étude des effets de la lumière, il nous reste à signaler la propriété que présentent certains corps, qui, après avoir été exposés quelque temps au soleil, apparaissent ensuite brillants dans l'obscurité, comme de véritables sources lumineuses. Cette propriété rappelle des phénomènes connus de tout le monde, alors qu'il s'agit de la chaleur. Un corps qui a été exposé à l'action d'un corps chaud, constitue, au bout de peu de temps, une source de chaleur. De même, un corps, exposé à l'action d'un corps lumineux, devient lumineux luimême après que la source excitatrice a disparu. La Phosphore de Canton que l'on obtient en calcinant les écailles d'huître, est de tous les corps phosphorescents le plus anciennement connu. Arrès avoir subil'insolation pendant quelque temps, il répand dans l'obscurité une lueur qui persiste pendant
plusieurs minutes. La substance ne perd pas ses propriétés par les insolations successives auxquelles on la soumet. On peut renouveler ce genre d'essais sur le même corps aussi souvent que l'on veut, la réussite est toujours certain.
(4) Mais l'acidité a ses degrés; il y a des acides forts et des acides faibles; de même pour l'alcalinité: il y a des bases fortes et des bases faibles. Quels moyens la théorie des ions fournit-elle pour en juger ?

En chimie ordinaire, - comme dans la vie ordinaire, -la force se juge par le résultat de la lutte. Un acide est plus fort qu'un autre lorsqu'il chasse celui-ci de ses sels, ou lorsq'il neutralise, à concentration égale, une plus grande proportion de base. Le degré d'acidité s'apprécie donc par la quantité de base nécessaire à la neutralisation. On se sert, pour décider du moment où la neutralisation est atteinte, d'un indicateur, d'un corps colorant. La teinture de tournesol est l'un des plus anciennement employés : on sait qu'elle vire du rouge au bleu quand la neutralité est atteinte. Mais, si, l'on emploie un autre indicateur, on trouve une autre quantité de base. Avec le même indicateur, on trouvera encore une autre quantité de base, c'est-à-dire une autre valeur de l'acidité si la liqueur acide est mélangée de divers liquides étrangers, quoique de réaction indifférente. L'opération est incertaine.

Dans la chimie des ions, la force de l'acide, c'est-à-dire son degré d'acidité, s'exprime par le nombre d'ions hydrogène qui est présent dans un volume donné.

Queen's University Examinations: April, 1907.

## Junior English.

I.
[Two questions in each of Sections I. and II. and all the questions in Section III.]
I. 1 Well, Brutus, thou art noble ; yet I see Thy honourable metal may be wrought From that it is disposed: therefore it is meet That noble minds keep ever with their likes;
5 For who so firm that cannot be seduced? Cæsar doth bear me hard; but he loves Brutus : If I were Brutus now and he were Cassius, He should not humor me. I will this night In several hands in at his windows throw
10 As if they came from several citizens, Writings all tending to the great opinion That Rome holds of his name ; wherein obscurely Cæsar's ambition shall be glanced at : And after this let Cæsar seat him sure ;
15 For we will shake him or worse days endure
(a) Give the precise meaning of the italicized words. (b) What is peculiar about the grammatical use of "that" line 3, "their" line 4, "him" line i4. (c) Name and explain the figures of speech in lines 2-3, "minds" line 4, "doth bear me hard" line 6, line 13, lines 14-15. (e) Who is meant by "he" lines 7-8? ( $f$ ) What side of Cassius' character is shown at the beginning of this speech? What at the end? Is the transition from the one to the other intelligible?
2. Give a sympathetic account of the character and motives of either Cassius or Shylock.
3. Continue two of the following quotations:
(1) Signior Antonio many a time and oft.
(2) The quality of mercy is not strained.
(3) How sweet the moonlight sleeps upon the bank.
(4) For once upon a raw and gusty day.
(5) O pardon me thou bleeding piece of earth.
4. Define the Balanced structure. Mention the various kinds of sentence structure which may be classed under this head. Compare the different use of the balanced structure by Bacon and Macaulay.
5. Define Propriety, Precision and Force as qualities of diction. Illustrate your answer by comment on each of the following sentences:
(1) Anarchy has broken prison, has burst-up from the infinite deep, and rages uncontrollable, enveloping a world.
(2) It is midnight ; the proud Grandee still lingers in his perfumed saloons, or reposes within damask curtains ; wretchedness cowers into truckle-beds or shivers hunger-stricken into its lair of straw.
(3) Whatever confidence may be placed in the decision of the Peers on an appeal arising out of ordinary litigation, it is certain that no man has the least confidence in their impartiality, when a great public functionary, charged with a state crime, is brought to their bar.
(4) In July I saw several cuckoos skimming over a large pond, and found, after some observation, that they were hunting dragon-flies, some of which they caught as they settled on the weeds, and some as they were on the wing.
(5) The whole hair consists of a very delicate outer case of wood, closely applied to the inner surface of which is a layer of semifluid matter, full of innumerable granules, of extreme minuteness.
6. Discuss from the following passage the qualities of Irving's style. Compare it with Macaulay's.

Morning, noon and night her tongue was incessantly going, and everything he said or did was sure to produce a torrent of household eloquence. Rip had but one way of replying to all lectures of the kind, and that, by frequent use, had grown up into a habit. He shrugged his shoulders, shook his head, cast up his eyes, but said nothing. This, however, always provoked a fresh volley from his wite, so that he was fain to draw off his forces, and take to the outside of the housethe only side which, in truth, belongs to a henpecked husband.

Rip's sole domestic adherent was his dog Wolf, who was as much henpecked as his master; for Dame Van Winkle regarded them as companions in idleness, and even looked upon Wolf with an evil eye, as the cause of his master's going so often astray. True it is, in all points of spirit befitting an honorable dog, he was as courageous an animal as ever scoured the woods-but what courage can withstand the ever-during and all-besetting terrors of a woman's tongue? The moment Wolf entered the house, his crest fell, his tail drooped to the ground, or curled between his legs, he sneaked about with a gallows air, casting many a sidelong glance at Dame Van Winkle, and at the least flourish of a broomstick or ladle, he would fly to the door with yelping precipitation.

## III.

7. (a) What does Macaulay mean in the Essay on Boswell's Johnson by "the dark night between two sunny days ?"
(b) What bearing has the description of the Grub Street Hack on the general purpose of the Essay?
(c) Illustrate from this Essay the characteristic qualities of Macaulay's thought or judgment.
8. (a) Give the general meaning of Tennyson's Palace of Art. (b) Explain the following stanzas, supplying historical illustrations :

The people here a beast of burden slow
Toiled onward, pricked by goads and stings ;
Here played a tiger, rolling to and fro
The heads and crowns of kings.
Here rose an athlete strong to break or bind
All force in bonds that might endure,
And here once more like some sick man declined
And trusted any cure.
9. (a) Give an account of Chaucer's description of the Knight. Quote as much as you can. Show the importance of the type in that age.
(b) Explain the following extracts from the Prologue, mentioning the characters referred to :

1 and in the Grete See At many a noble aryve hadde he be.
2 And peyned her to counterfete chere Of court \& ben estatlich of manere.
3 He wolde the see were kept for anything Betwixe Middelburg and Orewelle.
4 At sessiouns ther was he lord and sire Ful ofte tyme he was knight of the shire.
5 And this figure he added eek ther-to That if gold ruste, what shal iren do.

Queen's University Examinations : April, 1907.

## Senior English.

I.
[Any three questions in this section.]

1. Give a brief account of the Beowulf. Explain the system of versification used in that poem. Estimate it as representing the artistic and literary instincts of the race. Compare early Saxon and early Celtic poetry in respect of sentiment and expression.
2. What are the principal qualities of Chaucer's poetic work? Treat the subject under the following heads : descriptive power, art of narrative, dramatic power, reflective power, style.
3. What is meant by saying that Chaucer represented an age of faith? How far would the Prologue support this point of view? With what reserves or modifications must it be held?
4. She leaned against the armed man, The statue of the armed knight ; She stood and listened to my lay, Amid the lingering light.

- Few sorrows hath she of her own, My hope! my joy ! my Genevieve!
She loves me best whene'er I sing
The songs that make her grieve.
I played a soft and doleful air, I sang an old and moving storyAn old rude song, that suited well That ruin wild and hoary.
(1) What are the characteristic qualities of the Ancient Ballad and to what extent are they imitated in this modern ballad? Point out what is new and modern in the diction and sentiment of this ballad.
(2) Describe the general style of the 18 th century ballad, of Walter Scott's ballads, of Tennyson's, or, alternatively, of Wordsworth's. Refer to good examples of each.


## II.

[Any three questions in this section.]
5. And like the baseless fabric of the vision

The cloud-capped towers and gorgeous palaces,
The solemn temples and the great globe itself,
Yea all which it inherit shall dissolve
And, like this insubstantial pageant faded
Leave not a rock behind. We are such stuff
As dreams are made on, and our little life Is rounded with a sleep.
(a) Characterize the general effect of the above passage and point out to what peculiarities of thought, style and rhythm this effect is due.
(b) How have the occasion and circumstances of the Tempest determined the form and contents of the play.
(c) Show that the above passage expresses the main significance of the play for our imagination. What is the moral significance of the play?
6. Briefly contrast the characters of Prospero and Hamlet.
7. Continue two of the following passages :
(1) Oh what a noble mind is here o'erthrown.
(2) If by your art my dearest father.
(3) There is a willow grows aslant a brook.
(4) How all occasions do inform against me.
(5) Seems madam ! say it is; I know not seems.
8. Point out the respective influence of character, insanity, accident and the supernatural in bringing about the catastrophe in Hamlet. Which is the
main influence? Does the play clearly show that Hamlet failed through weakness or is the meaning more subtle?
9.

- As when the potent rod

Of Amram's son, in Egypt's evil day,
Waved round the coast up called a pitchy cloud
Of locusts, warping on the eastern wind
That o'er the realm of impious Pharoah hung
Like night, and darkened all the land of Nile.
(a) Who is Amram's son? Why does Milton prefer this expression to the better known name? Show that he constantly avoids the weak or the vulgar in diction. Comment on the syntactical structure of the passage and show how it helps to produce the grand style. Mark the accents, pauses, quantity, etc., of the last two lines, and show how the rhythm is appropriate to the mingled feelings with which Milton contemplates the judgment on Pharoah and Egypt.

## III.

[Any two questions in this section.]
10. What is the place of Marlowe in the development of Blank Verse? Describe the structure and spirit of the Miltonic sonnet.
11. When first the college rolls receive his name, The young enthusiast quits his ease for fame ; Resistless burns the fever of renown, Caught from the strong contagion of the gown ; O'er Bodley's dome his future labours spread, And Bacon's mansion trembles o'er his head, Are these thy views? Proceed, illustrions youth, And Virtue guard thee to the throne of Truth! Yet should thy soul indulge the gen'rous heat, Till captive Science yields her last retreat ; Should Reason guide thee with her brightest ray, And pour on misty Doubt resistless day.

Yet hope not life from grief or danger free, Nor think the doom of man revers'd for thee.
(a) What are the characteristic qualities of the diction in this passage? Select what you consider the three most striking examples. Compare Johnson's poetic diction with that of Goldsmith.
(b) What ills does Johnson enumerate as typical of the scholar's career? Is his representation as applicable to our time as to his own?
12. What is the value of the following critical judgments? Characterize the style and compare it with Matthew Arnold's.
(1) It is the scenes that he has loved and laboured amidst that he describes; those scenes rude and humble as they are have kindled beautiful emotions in his soul, noble thoughts and definite resolves.
(2) To the last he wavers between two purposes, glorying in his talent like a true poet he yet cannot consent to make this his chief and sole glory, and to follow it as the one thing needful through poverty and riches, through good and evil report.

## IV.

[Any three questions in this section.]
13. From what poems are the following extracts taken? Explain their meaning in connection with the context.
(1) He was a man born with thy face and throat Lyric Apollo.
(2) Dust and ashes, dead and done with, Venice spent what Venice earned.
(3) Hide, blushing Glory, hide Pultowa's day.
(4) And happy melodist, unwearied For ever piping songs for ever new.
(5) But here is the finger of God, a flash of the will that can.
(6) The eagle, lord of land and sea, Stooped down to pay him fealty.
(7) This is the flame that shook with Dante's breath And the clear glass where Shakespeare's shadow falls.
14. Classify the following words indicating the period of their introduction into English and the influences they represent and commenting on any notable changes they have undergone in spelling, pronunciation, or usage : monk, travail, seismology, adverb, eld, squire, predicate, chagrin, poor.
15. (a) Define the processes of syncope, apocope, mutation, palatalization and illustrate them from the following words: damsel, riches, crown, eldest, Welsh, regiment, cartesian, set, tenure, Lysias.
(b) State and illustrate Grimm's law.
(16) Thoru out al Engeland he huld wel god pes ;

Vor me mizte bere bi is daye and lede hardeliche Tresour aboute \& other god oueral aperteliche, In wodes and in other studes so that no time nas Thet pes bet isusteined than bi his time was.
Turn into modern English. Point out the words of French origin. Account for the forms of the words "huld," "mizte," "hardeliche," "isusteined." Comment on the obsolescence, partial or complete, of words in this passage.

Queen's University Examinations : April, 1907.

> PASS.

## English Constitutional History.

1. "The fundamental principles of political constitutions exist before all written law." Discuss the applicability of this statement to the English constitution.
2. Discuss the constitutional character of Saxon and Norman kingship.
3. Discuss "The Constitution of Clarendon was not a mere engine of spiritual tyranny but a part of a general scheme of administrative reforms."
4. Discuss "The Constitution as we know it may be said to date from Edward I."
5. Discribe the Judical organization of the Plantagenet rulers.
6. Discuss the character and functions of the Lancasterian Privy Council.
7. Discuss the constitutional principles established by the Bill of Rights.
8. Discuss the political significance of the Act of Uuion 1800 .
9. Discuss the functions of the American Senate.
10. Describe the political conditions that produced Lord Durham's report, and the nature of its recommendations.

Queen's University Examinations : April, 1907.

## PASS.

## Mediæval History.

1. Distinguish between Greek and Roman civilization, and trace briefly the influences of each on the future development of Europe.
2. Trace the origin and growth of the Feudal System.
3. Trace the growth of the French Monarchyterritorially, judicially, in regard to the communes, and in ecclesiastical affairs-from the accession of Hugh Capet to the reign of Francis I.
4. Why were the States General unable to exercise any constitutional influence in France ?
5. Give a brief outline of the liberal movement of the twelfth century, and of the views of St. Bernard of Clairvaux and of Arnold of Brescia.
6. Trace the development of the French CourtsCuria Regis, the Parliament of Paris, and the Grand Chambre.
7. The reign of Francis I. more than any other marks the great change, which was taking place, from Mediæval to Modern Civilization." Describe the change.
8. "French philosophy in the 18fh century was bold, sceptical and revolutionary." Discuss this this statement.

Queen's University Examinations : April, 1907.

## Mental Philosophy.

## Intra-mural.

1. (a) What is philosophy? (b) Examine the view of Locke, or Hume, or W undt as to what philosophy is.
2. State briefly and examine (a) Plato's, and (b) Aristotle's answer to the question, "What is Knowledge or Science?"
3. What is meant by end of action? Is there in it any reference to the agent himself? What reasons have you for thinking that there is one supreme end ?
4. Can we conceive of the universe as concerning itself in the realization by man of his ideals? Mention the difficulties which belong to this inquiry and how you would solve them.
5. (a) "Virtue is knowledge," (b) "Virtue is habit." Consider these views.
6. What is meant by a teleological theory? Show where this theory is found in Aristotle. What view did it supplant?
7. Examine the theories $(a)$ that religion is a mental disease, (b) that religion has its origin in ancestorworship. What is the true view of religion? Explain your answer.

Queen's University Examinations: April, 1907.

## Mental Philosophy.

## Extra-mural.

1. State the Sophistic theory of knowledge and give Plato's criticism of it.
2. (a) Briefly outline Plato's Theory of Education.
(b) Mention what you regard as the chief defect of this theory. Justify your conclusions.
3. "Moral choice is either reason stimulated by desire or desire guided by reason" (Eth. vi. 2).

Explain this statement and show how Aristotle's theory of conduct is related to his theory of mind.
4. Contrast the Stoic and Epicurean theories of the best life and point out the main defects and virtues of each theory.
5. Examine the Cartesian dualism between mind and matter and point out how this opposition may be overcome.
6. "The extreme view of idealism is to deny the existence of matter and the material world, and to regard the material universe as phenomena due only to the ideas of our minds'".
(a) Explain this statement and name the chief exponent of this view.
(b) Criticise this conception of mind and matter.

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## Moral Philosophy.

## Intra-mural.

[Only six questions are to be done].
I. "When the sun shines the stone grows warm." How would this judgment be explained by ( $a$ ) Hume, (b) Mill, (c) on the theory of the identity of cause and effect?
2. Distinguish between the sensuous and the logical concrete, and apply the distinction in criticism of Comte's law of development.
3. "The higher animals display curiosity and imagination, and some of them possess a rudimentary language. " In what sense, if any, is this saying of Darwin true?
4. Compare and contrast Stoicism and Epicureanism.
5. Show that Asceticism is not self-consistent, and examine the opposition which it assumes between desire and reason.
6. "A man is too indolent to develope his natural talent for business." Would Kant say that he violates "perfect" or "imperfect" obligation? Is the distinction valid?
7. "The strongest motive determines the act." Explain and criticise this doctrine.
8. "To comprehend the origin of evil we should have to contemplate the inner nature of man as free from the form of time." Bring out the meaning of this statement by showing how Kant is led to oppose the phenomenal and the noumenal self.

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## Moral Philosophy.

## Extra-mural.

[Six questions constitute a full paper].

1. State Comte's doctrine of the Relativity of Knowledge, and criticise his view of positive science as giving an ultimate explanation of reality.
2. "The nature of our consciousness is such that any experience of the enclosure of a space by two straight lines is an impossible experience." Prove this statement, and briefly show its bearing upon the universality and necessity of geometrical propositions.
3. How is evolution defective in explaining knowledge and morality?
4. "Thus it was held by the ancient Stoics that morality consists in acting purely from the law of reason, as distinguished from the law of desire." Estimate the value of this theory, and show how desire and reason are to be reconciled.
5. State and criticise Kant's view of the Summum Bonum.
6. Discuss Kant's doctrine of rights.
7. From the point of view of man's true ideal, reinterpret Mill's conception of Utilitarianism.
8. Point out the defect in Spencer's view of ethics and show its value in regard to the ideal of society.

Queen's University Examinations : Aprib, 1907.

## Economics.

## Intra-mural.

1. Define economic value, wealth and capital, and state the essential relations which exist between them.
2. Discuss the relative importance and mutual relations of manufacture and transportation as factors in production.
3. What are the chief conditions which lead to over-production, and how may the tendency be corrected?
4. Account for the transition from the bank note to the cheque as a medium of exchange.
5. Discuss the various methods of distribution proposed under socialism.
6. What is the force of the standard of living in determining wages?
7. In what sense, if any, does rent enter into cost of production?

Queen's University Examinations : April, 1907.

## Economics.

## Extra-mural.

I. Give the chief features of the industrial condition of England during the reigns of the first three Edwards.
2. Compare the economic and social effects of the introduction of the factory system in England.
3. State the characteristic features of time-value, and show its relation to interest and profit.
4. What are the chief functions of a bank in the economic activities of Canada?
5. Outline the chief methods and policies of trades unions.
6. What conditions in the past have occasioned economic crises? Are these conditions subject to change, and with what possible results?
7. Estimate the chief arguments advanced for the state control of public utilities.

Queen's University Examinations : April, 1907.

## Politics.

## Intra-mural.

1. Compare the standpoints from which Aristotle, Machiavelli, and Locke approach the study of Political Science.
2. Outline the Greek conception of the ideal free citizen, as presented by Aristotle, and consider the economic and social structure of a society necessary to his existence.
3. Discuss Machiavelli's treatment of the relation between ethics and politics.
4. What are the essential elements of sovereignty, and how are they expressed in a modern democracy?
5. Give a constructive criticism of Locke's use of reason as the guiding principle in social and political relations.
6. What constitutes individual liberty, and how is it reconcilable with social or political obligation?

Queen's University Examinations : April, 1907.

## Politics.

## Extra-mural.

1. Compare the standpoints from which Aristotle and Rousseau approach the study of Political Science.
2. What is the full significance of Aristotle's statement that man is by nature a political animal ?
3. Outline the Greek conception of the ideal free citizen, as presented by Aristotle, and consider the social and economic structure of society which was necessary to his existence.
4. "The sovereign, being formed only of the individuals comprising it, neither has nor could have interests contrary to theirs. "-Rousseau. Consider (a) what advantage there could be in individuals forming such a sovereign? (b) whether there could be any individual interests which would conflict wlth such a sovereign ? (c) if there could be such interests, on what grounds they might be judged to be such, and who would be the judge?
5. Has society or the state any meaning apart from the individuals who compose them? Consider, in the light of your answer to this, what right any individual or group of individuals has to make laws, or what obligation others are under to obey them ?

6 Consider whether, or on what grounds, corporations have any claim to greater rights than individuals, within the same state?
7. What has occasioned the extension of state functions within recent years? What significance has this for individual initiative and responsibility?

Queen's University Examinations : April, 1907.

## Junior Mathematics.

(At least $20 \%$ must be made on each Division, A, B and C.)

## A

I. (a) Give any test, other than actual division, for finding if $(a-b)$ is a factor of a given expression, and explain why it is a test.
(b) Put into linear factors (1) $x^{3}-3 x^{2}-x+3$, (2) $\Sigma_{3} x^{3}(y-z)$.
2. (a) Express $2 \Sigma a^{2} b^{2}-\Sigma a^{4}$ as the product of four linear factors. (b) If $a, b, c$ denote the sides of a triangle, what does the expression in (a) represent?
3. The value of a coin varies directly as its thickness and as the square of its radius. A coin $1 / 8^{\prime \prime}$ thick and $1 / 2^{\prime \prime}$ radius is worth $\$ 5$. What is the value of a coin $\frac{1}{16}{ }^{\prime \prime}$ thick and $11 / 2^{\prime \prime}$ radius?
4. Draw the graph of $x^{3}-x^{2}-4 x+4$, and thence find the roots of the equation $x^{3}-x^{2}-4 x+4=0$, and also state for what values of $x$ the given expression is positive or negative.
5. (a) Find the sum of 100 terms of the series $3+7+11+15+\ldots$.
(b) Sum to $n$ terms, also to infinity, the series

$$
1+\frac{1}{3}+\frac{1}{9}+\frac{1}{27}+\frac{1}{81}+\ldots
$$

(c) Write the first five terms in the expansion of $(x-2 a)^{n}$.

## B.

6. The moon is 240,000 miles from the earth and subtends an angle of $32^{\prime}$. Find its diameter to the nearest mile.
7. Prove the formulae

$$
\begin{aligned}
& \text { (a) } \frac{a}{\sin A}=\frac{b}{\sin B}=\frac{c}{\sin C}=d \\
& \text { (b) } a^{2}=b^{2}+c^{2}-2 b c \cos A
\end{aligned}
$$

8. In a triangle, $a=20, B=60^{\circ}, C=75^{\circ}$. Find (a) the side $b, \quad(b)$ the circumradius.

## C

9. (a) The medians of a triangle are concurrent, and divide each other how?
(b) Show how to divide a given line segment into three equal parts.
10. (a) In a concylic quadrangle an external angle is equal to the opposite internal angle.
(b) $A B C D$ are four points on a circle. $A B$ and $C D$ meet in $P$, and $A C$ and $B D$ meet in $Q$. Prove that the bisectors of the angle at $P$ are respectively perpendicular to those of the angle at $Q$.
II. (a) Draw a circle to touch the three sides of a triangle.
(b) If the sides be $13,14,15$, find where the incircle touches the sides.
11. (a) State and prove the areal relation existing amongst the segments of two intersecting chords of a circle.
(b) On a given line segment construct a rectangle equal to a given rectangle.

Queen's University Examinations : April, 1907.

## Senior Mathematics.

I. Find the sum of $n$ groups of the series $\mathrm{I}+(3+5)$ $+(7+9+1$ r $)+\ldots$.
2. Find in its simplest form the square root of $1-2 x$ to 5 terms, by using (a) undetermined coefficients, (b) the binomial theorem.
3. Separate $(x+4) /(x-1)(x+2)^{2}$ into partial fractions.
4. Find the error in substituting the 4 th convergent of 0.01745 for the value of the fraction.
5. Find $\sin 2 \theta$ and $\cos 2 \theta$ in terms of functions of $\theta$; and thence show that

$$
\tan ^{2} \frac{\theta}{2}=(\mathrm{I}-\cos \theta) /(\mathrm{I}+\cos \theta) .
$$

6. $a$ and $b$ are adjacent sides of a parallelogram, and $\theta$ is the angle between them. $\phi$ is the angle between the diagonals. Show that
(a) The lengths of the two diagonals=

$$
\sqrt{a^{2}+b^{8} \pm 2 a b \cos \theta}
$$

(b) $\cos \phi=\left(a^{2}-b^{2}\right)^{2} / \sqrt{\left(a^{2}-b^{2}\right)+2 a^{2} b^{2} \sin ^{2} \theta}$.
7. Show how to find a segment such that the rectangle on it and a given segment shall be equal to a given rectangle.
8. Show that the rectangle on any two sides of a triangle equals twice the rectangle on the circumradius and the altitude to the third side, and thence
obtain a formula suitable for calculating the circumradius of a triangle when its three sides are given.
9. (a) Find a line segment which shall be a mean proportional between two given line segments.
(b) The area of similar triangles are proportional to the squares on homologous sides.

Io. (a) Prove that there can be only five regular polyhedra.
(b) Classify the regular polyhedra according to (i) their faces, (ii) their reciprocation.
in. Three conterminous edges of a tetrahedron are $a, b, c$, and the edges opposite these are $a^{\prime}, b^{\prime}, c^{\prime}$. If $m$ denotes the length of the median to the face whose edges are $a, b^{\prime}, c^{\prime}$, show that $9 m^{2}=3^{\Sigma} a^{2}-\Sigma a^{\prime 2}$. Thence deduce the length of the radii of the circumscribed sphere and the inscribed sphere to a regular tetrahedron.

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## Junfor Physics.

 A.Dynamics.
[Any five questions].

1. A specific gravity bottle full of alcohol (density -8) weighs 76 gms . A piece of mineral weighing 25 gms . is placed in the bottle when bottle and contents weigh 91 gms. Determine the density of the mineral.
2. A body is projected vertically upward with speed of 500 ft . per sec. Determine the height to which it will rise and the time necessary for it to return to starting point.
3. (a) A mass of 150 gms . hangs on a spring balance. What would be the reading of the balance if the system has an acceleration of 350 cm . per sec. per sec. upward?
(b) What downward acceleration would reduce the reading to zero?
4. (a) Define the various units of force, and the units of pressure derived from them.
(b) A body which weighs 100 lbs . at the surface of the earth would have what weight at a distance of 8,000 miles from the centre of the earth ?
5. (a) State Archimedes' Principle.
(b) Define vector and show by diagram how to combine three vectors.
(c) Describe the hydrostatic press.
6. A constant force acts on a body whose mass is 100 gms . for 10 sec ., when the speed is changed from 800 cm . per sec. to $1,200 \mathrm{~cm}$. per sec. What is the force? What is the change in momentum?

## B.

Electricity, Magnetism, and Sound.
[Any three questions].
7. (a) What is the principle involved in the use of an electrophorous?
(b) What is the source of the electrical energy?
(c) Why should one avoid sharp edges or points on the electrophorous?
8. What are the two most important principles used in depolarizing voltaic cells?
9. Describe "Wheatstone's Net or Bridge, " and establish the relations of the resistances in the arms when the bridge is " balanced. "
10. (a) Why are sound waves spoken of as "longitudinal?"
(b) Describe an experiment to illustrate this longitudinal vibration of a sound wave.

## C.

Light, and Heat.
[Any three questions].
iI. Define the terms:-latent heat of fusion, specific heat, coefficient of expansion, dew-point, distillation, convection, principle focus, conjugate foci, spectrum, critical angle.
12. A piece of silver of mass $100 \mathrm{gms}$. , of specific heat 095 , and at temperature $200^{\circ} \mathrm{C}$., is placed in 500 gms. of water at temperature $5^{\circ} \mathrm{C}$. Find the resulting temperature.
13. Explain one method for determining the velocity of light.
14. (a) Given a concave mirror and an object placed against the mirror. Describe the motion of the image as the object moves along the principal axis to a very great distance from the mirror.
(b) A light is placed 500 cm . from à wall. Where between the light and wall must a lens whose focal length is 25 cm ., be placed in order that a real image may be found on the wall larger than the object?
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Queen's University Examinations : April, 1907.

## Senior Physics.

[Any ten questions.]

1. A bullet of mass 30 grams was fired horizontally into a block of wood of mass 10 kg . If the block was suspended by a string 500 cm . long and moved so that the string made an angle of $30^{\circ}$ with the vertical, what was the velocity of the bullet?
2. A weight of $\mathrm{I}, 000 \mathrm{lbs}$. is supported by two equal beams 10 ft . long, fastened together at their upper ends, the lower ends being tied together by a rope 10 ft . long and resting on a smooth horizontal floor. Calculate the tensiou of the rope caused by the weight.
3. A small weight is supported by a rubber band and it is found that 2 oz . additional stretch the band 0.2 in . If the total load is 12 oz . and the system oscillates vertically, determine the period.
4. A bicyclist rounds a curve of 100 ft . radius with a speed of 50 ft . per second. At what angle with the vertical should the wheel be inclined?
5. A mass of 1000 lbs . moving with a speed of 100 ft . per sec. is brought to rest by a corstant force in 20 sec. (a) Find the force. (b) Find the distance traversed. (c) If the force is friction find the coefficient of friction.
6. A body whose mass is 500 gms . rests on a smooth inclined plane whose altitude is 5 ft . and slant height 20 ft . (a) Find the force necessary to apply parallel to the plane to keep the body from sliding. (b) Find the pressure perpendicular to the
plane. (c) Find the speed with which it will reach the bottom of the plane if started from the top with speed of 100 cm . per sec.
7. Describe, a method of measuring the surface tension of a liquid. Calculate the difference between the pressures inside and outside of a soap bubble.
8. How could you find experimentally the curve connecting the vapour pressure of water with the temperature? Explain how to use this curve to find the relative humidity from an observation of the dewpoint.
9. Describe the process of freezing a dilute soluiion of common salt. Explain the action of a freezing mixture.
10. Describe a method of finding the mechanical equivalent of heat, showing how the work involved is measured.

I i. Give a graphical method of finding the position and size of an image formed by a lens. What is an achromatic lens and why is it used ?
12. Give reasons for believing that light consists of waves and describe a method of measuring the wave length.
13. What difference is there between the two beams into which a single beam of light is divided by a prism of a doubly refracting substance? How may this difference be detected? What is meant by calling these beams plane polarized ?
14. Show generally the relation between magnetic force and induction in iron and describe the phenomenon of hysteresis. What theory is given in explanation?

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## Junior Botany.

FIRST PAPER.

1. Make a list, in the following tabular form, of the plants in the bundle submitted:

| No. | Order. | Genus. | Species. |
| :--- | :--- | :--- | :--- |
|  |  |  |  |

2. Select one specimen belonging to the order Rosaceæ, and another belonging to the Compositæ, and describe them on the printed forms submitted.

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## Junior Botany.

SECOND PAPER.
I. Describe the light relation of foliage leaves under the following heads:-(I) Fixed position, (2) Motile leaves, (3) Compass plants.
2. Describe any three types of stems bearing foliage leaves.
3. Mention any four ecological factors and explain the effects of any one of them.
4. Explain any four ways in which plants ward off unsuitable insects.
5. Describe any two ways in which Carnivorous plants secure their prey.
6. How may a plant prepare for winter or drought?
7. State the distinguishing characteristics of any two of the following families:-(I) Ranunculaceæ, (2) Leguminosæ, (3) Rosaceæ.
8. Give the general characters of any two plant societies.
9. State the distinctions between Dicotyledons and Monocotyledons.
ro. Describe three methods of preventing selfpollination.
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> FACULTY OF ARTS.

## Pass Animal Biology.

1. Discuss the relation of animals to the soil and to the seeding of plants.
2. Illustrate what is meant by adaptation. By division of labor. By the occupations of animals.
3. Describe a unit of the nervous system. What is the nervous mechanism for a reflex act? Define stimulus, impression, sensation, perception. Give examples of instinct in birds, and of reasoning in the case of mammals.
4. Write notes on some bacteria on some protozoa both of which are parasitic in man.
5. Draw a diagram illustrating the structure of marine hyroids. Sketch the life history of the jelly fish (aurelia).
6. What are the classes of the Arthropoda? Describe the structure of the crayfish.
7. Give the classes of the Mollusca and describe the structure of a snail.
8. Explain what is meant by a sauropsida. By the ichthyopsida. Give the general characters of the ratitae.

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Extra-murals.
[Extra-murals and those who have not attended the pass class will answer questions, $3,5,6,7,8$, and the following in addition.]
I. Compare the external parts of the catfish with those of the frog.

2, Compare the hind limb of a bird with that of the cat. Describe the different kinds of hairs found in mammals and point out, where possible, homologous structures in other vertebrates.
3. Write notes upon the molluscoidea.

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## FACULTY OF ARTS.

## Physiology and Hygiene.

I. Discuss the hygiene of movement.
2. Discuss the hygiene of the circulation.
3. Enumerate the principal rules to be observed in maintaining a house in a hygienic condition.
4. Explain what is meant by cell multiplication and cell differentiation in the Embryo. What tissues and organs form first in the Embryo?
5. What is the work of the muscles? Point out the different purposes which the contraction of muscles serves in the body.
6. What is the composition of a normal diet? Specify the circumstances which necessarily cause marked variations from this normal. Describe the changes which the food stuffs undergo during their passage through the columnar cells of the intestine.
7. A man engages in violent athletic exercise. Specify the effects of the unusual exertion upon different functions of the body.
8. Define a nerve centre. Specify some important centres in the brain and medulla. Indicate circumstances which affect the respiratory centre.
9. State the law of specific sensation of nerve fibres, and describe the distribution and endings of the nerves of taste.
$1 \%$

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## Junior Chemistry.

I. Define the different classes of chemical change and describe an example of each class.
2. Describe clearly an experiment made to illustrate the meaning of the Law of Conservation of Matter. State the Law.
3. Show that the following case comes under the Law of Multiple Proportions: $\qquad$

|  | COMPOUND I. | Compound |
| :---: | :---: | :---: |
| Element A. | ....40\% | 31.25\% |
| Element B | 12\% | .18.75\% |
| Element C. | 48\% | 50.00 |
|  | 100 | 100 |

4. Derive the valency of the radicle $\mathrm{As}_{4}$ from a comparison of the following formulas :
$\mathrm{H} \mathrm{Cl}, \mathrm{Fe} \mathrm{Cl}_{3}, \mathrm{Fe} \mathrm{As} \mathrm{O}_{4}$.
5. Show from the following statement the application and meaning of the Law of Reciprocal Proportions:-

COMPOUND I. COMPOUND II. COMPOUND III. Element A..71.43\% Element A..36\% Element..B 18.4\% Element B..28.57\% Element C..64\% Element..C 81.6\%
6. (a) Show by means of formulas the resemblances between oxygen compounds and sulphur compounds.
(b) Write equations for the action of sulphuretted hydrogen on :-
(1) Solution of cupric sulphate.
(2) Solution of mercuric chloride.
(3) Solution of bismuth nitrate.
(4) Solution of ferric chloride.
(5) Solution of iodine.
7. (a) Name the metals of Group III, pointing out which of them are dyad and which triad.
(b) Write equatious for the action of ammonium hydroxide on :-
(1) Solution of ferric chloride.
(2) "، "، aluminium sulphate.
(3) "، " manganous sulphate.
(4) "، cobaltous nitrate.
8. (a) Describe two ways in which the nitrogen of the atmosphere can be converted into commercial products.
(b) How is nitric acid manufactured? Equation.
(c) Compare the action of ammonia and of caustic soda on hydrochloric acid.
9. (a) Describe a process by which oxygen can be obtained from the atmosphere on a large scale.
(b) Is the conversion of oxygen into ozone a chemical change? Discuss.
(c) State clearly the experimental reasons for using the formulas $\mathrm{O}_{2}$ and $\mathrm{O}_{3}$ for oxygen and ozone respectively.

Io. (a) Define hydroxides.
(b) Write formulas for the following: Potassium hydroxide, calcium hydroxide, ammonium hydroxide, ferrous hydroxide, ferric hydroxide.
(c) Mention a compound which can act either as an acid or as a base, and write its formula so as to indicate each function.

# Queen's University Examinations : April, 1907. 

## Senior Chemistry.

Section II with either Section I or Section III constitutes a complete paper.
N.B.-Write each section on a separate pad and put your name and number of section on each pad.

## I.

Choose five questions.
I. Show by means of formulas and descriptions the relations between monohydric alcohols, aldehydes, ketones, monobasic fatty acids, primary amines, acyl amides, and acyl chlorides.
2. Write equations for five synthetic reactions in which methyl iodide is used.
3. Write equations for the series of reactions by which ethyl alcohol can be converted into propionic acid.
4. Compare cyanides, isocyanides, cyanates, isocyanates, thiocyanates, and isothiocyanates.
5. Compare the action of nitric acid on either glycerine or cellulose with its action on benzene, and describe the compounds formed.
6. Define hydroxyacids and amidoacids, and describe two members of each class of compounds.
7. Compare the action of sulphuric acid on alcohol with its action on phenol (carbolic acid) and describe the compounds formed.
II.
N.B.-Write each section on a separate pad and put your name and the number of section on each pad.

1. Discuss chemical equilibrium as applied to the lime kiln.
2. Calculate the equivalent weight of potassium bichromate.
(a) as a potassium salt.
(b) as yielding a chromic salt, and
(c) as an oxidising agent.
$[\mathrm{K}=39, \mathrm{Cr}=52, \mathrm{O}=16]$.
3. Describe and explain two cases of abnormal gas density.
4. Explain the explosive character of (a) nitrogen trichloride, and (b) 'nitro-glycerine", mentioning the products of the explosion, and using thermochemical ideas to account for the explosion.
5. Use chemical equilibrium and Watt's principle to explain the movements of oxygen and carbon dioxide in the human body.

## III.

N.B.-Write each section on a separate pad. Put your name and the section number on each pad.

Choose five of the questions.
I. (a) Define as clearly as you can what is meant by a metal.
(b) Show, with examples, why it is not always easy to classify metals and non-metals accurately.
(c) Give, with examples, the characteristics which render metals valuable for technical purposes.
2. Discuss briefly : (a) The solubility of various metals in the common mineral acids.
(b) The solubility of metal sulphates, chlorides, nitrates, phosphates, and carbonates, in water.
3. (a) What are the principal natural sources of sodium ?
(b) Describe briefly the methods of producing metallic sodium and potassium.
4. (a) What are the frincipal natural compounds of the alkaline earth metals ?
(b) Explain briefly, with equations, the manufacture and setting of mortar, and
(c) The manufacture and setting of plaster of paris.
5. (a) Give the names and composition of the principal natural compounds of silver.
(b) Outline briefly the reduction of silver from its ores,
(c) Describe the process of electroplating with silver.
6. (a) Outline, with equations, the chemistry of the reduction of zinc from its ores.
(b) Discuss the properties and uses of zinc, its alloys, and its compounds.
7. (a) Give names and formulas of the chief natural compounds of iron.
(b) Classify iron compounds and mention characteristic tests of each class.
(c) Describe, with equations, two methods by which iron compounds can be "oxidised" and "reduced."
(d) Name five elements which are used to harden and toughen steel.
8. Give equations for the following reactions, noting any precipitates, changes of colour, etc.
(a) Nitric acid, strong and dilute, on tin.
(b) Hydrochloric acid on silver and on silver nitrate solution.
(c) Potassium permanganate solution on an acid solution of ferrous sulphate.
(d Stannous chloride solution on solution of mercuric chloride and ferric chloride.

Queen's University Examinations : April, 1907.

FACULTY OF ARTS AND PRACTICAL SCIENCE.

## Elementary Mineralogy and Blowpipe Analysis.

## Mineralogy $I$.

I. Describe the following minerals using the accompanying slip-(a) calcite, (b) fluorite, (c) barite, $(d)$ magnetite, $(e)$ siderite, $(f)$ limonite, ( $g$ ) apatite, $(h)$ orthoclase, ( $i$ corundum, ( $j$ ) amethyst, ( $k$ ) beryl, $(l)$ tourmaline, $(m)$ chrysolite, $(n)$ chrysotile, $(o)$ kaolin, $(p)$ zircon, $(q)$ garnet, $(r)$ nepheline.
2. Sketch and describe in detail the axes of the monoclinic system.
3. Give with Naumann's symbols the simple forms of the monoclinic system.

Practical.

- 4. Determine the lettered specimens by field tests and the numbered specimens by the blowpipe.

Queen's University Examinations : April, 1907.

FACULTIES OF ARTS AND PRACTICAL SCIENCE.

## Pass Geology and Geology I.

1. What is a fossil? Discuss fully the process of fossilization, and the necessary conditions for it.
2. Mention and briefly discuss the uses that may be made of fossils.
3. Describe the climatic and geological conditions that prevailed in Carboniferous times in America, and name the chief fossils found in rocks of this age.
4. Classify vertebrate life and give two extinct representatives of each class.
5. Describe by word or diagram the following fossils, giving the class and geological age to which each belonged :-Arthrophycus harlanii, Columnaria alveolata, Michelinea, Murchisonia gracilis, Cystiphyllum, Megalomus canadensis, Goniatite, Strophomena alternata, Phyllograptus pristis, Asaphus platycephalus.
6. Discuss the differences in the conditions under which shales and limestones are formed.
7. Account for the fact that the southern slopes of the mountains in the Western Cordilleras have a moderate grade while the northern slopes are precipitous.
8. From your knowledge of volcanoes suggest a classification, explaining and giving reasons for your scheme.
9. How is erosion performed by rivers. 8
10. Define gneiss, quartzite, diorite, laccolite, syncline, dip, talus, porphyry.

Queen's University Examinations : April, 1907.

## Junior Hebrew.

I. Translate: (a) Gen. I. 26 ;
(b) Ps. I. 4 and 5 ;
(c) I. Sam. Ix. 8 ;
(d) I. Sam. x. 16.
2. Parse : (a) All the verbal forms in Gen. I. 7 and 28 .
(b) All the noun forms in I. Sam. IX. 16.
3. Write concise grammatical notes on the following :
(a) the heavy pronominal suffixes.
(b) the definite article before gutturals.
(c) the scheme of the Hebrew verb
(to illustrate the force and relationship of the various stems).
4. Show how the nouns of the first declension are affected
(a) by the addition of plural endings.
(b) by the addition of the pronominal suffixes.
(c) in the construct state.

Give examples.
5. Give the following parts of ${ }_{\text {Pu }}^{T}$
(a) Qal perfect 2nd. plur. fem. and passive participle.
(b) Niphal imperf. ist sing. and infinitive construct.
(c) Piel perf. ist plur. and imperf. 3 rd pl. fem.
(d) Hiphil perf. 2nd masc. sing. and imperf. 2nd fem. pl.
6. Translate : וְצִדקקתוֹ לִבְני בָנִים :





7. Translate into Hebrew :
(a) Thy law is in our heart O our God.
(b) Ye are my sons and my daughters saith your God.
(c) The just are as the stars which are in the firmament.
(d) These are the proverbs of the wise king of Israel.
(e) The heavens of the heavens are God's (dat.) and the earth he has given to the sons of man.

Queen's University Examinations: April, 1907.

## Senior Hebrew.

1. Translate :
(a) Haggai I. 9, II. 16-17 ; Jonah iI. 4, 5, 6, iv. II ; Malachi I. 8-9, II. I3.
(b) Write a note on the Hebrew idiom in Jonah II. 5, and IV. 2, and on the use of the infinitive and participle in Haggai 1.9.
2. Parse :
(a) the verbs in Jon. IV. I, and Mal. iI. 8.
(b) the nouns in Haggai iI. 22.
(c) all the verbal and nominal forms in Mal. III. 2. 3. Give the following verbal forms :
(a) the Qal impf. 2nd pl. m. and infin. constr. of ขู
(b) the Qal. perf. 2nd pl. m., imperf. and fem. sing. and infin. constr. of 9
(c) the Qal. imperf. 3 rd f. pl. and imper. and pl. m., also the Niph. imperf. ist pl. of ${ }_{\mathrm{Z}}^{\boldsymbol{T}}$
(d) the Qal. perf. 2nd m. pl., imperf. 3rd pl. f. קוּט and infin. abs. of
(e) the Qal. perf. 2nd s. m. and imperf. 3 rd f. pl. of
3. Translate into Hebrew :

Queens, your (pl.) book, the (two) horns of the altar, according to thy great holiness, his boys and his girls.
5. (a) Outline the scheme of the Hebrew verb, showing the force and relationship of the various stems, and explain the origin of the names of the stems.
(b) Give a skeleton paradigm of the Niphal, Piel, Hithpael and Hiphil of the regular verb.
6. Translate into Hebrew :
(1) Let me keep thy great righteousness continually before me.
(2) Thy feet shall not stand upon my holy hill.
(3) Let us obey (hearken unto) the words of Yahweh, our God, that he may call us his sons and his daughters.
(4) I will surely hide my face from the God of all the earth.
(5) Honour not the kings of earth, but sanctify yourselves before Him in whom is all holiness.
7. Translate :







## ARTS HONOUR PAPERS

Queen's University Examinations : April, 1907.

## PRELIMINARY HONOURS.

## Latin.

## Roman History.

[N.B.-Not more than six questions to be answered, of which at least two must be in Section B.]

## A

I. Describe the power and functions of the Roman kings.
2. What were the spolia opima? Were they won by Aulus Cornelius Cossus? How does Livy discuss the question?
3. Describe the development of the Plebeian Assembly from the beginning of the Republic to 287 B.C.
4. What were the results in Italy of the Second Punic War?
5. Give an account of Julius Cæsar's campaigns in Gaul.
6. "That notorious political trimmer, Marcus Cicero".-Mommsen. Discuss the justice of this opinion.
7. Trace the career of Augustus from the death of Julius Cæsar to the battle of Actium.
8. What was the position of the Senate under (a) Augustus, (b) Nero, (c) Marcus Aurelius?
I. Compare the comedies of Plautus and Terence.
2. "Satura tota nostra est". -Quintilian. Discuss this, and compare Horace and Juvenal as writers of satire.
3. Estimate Lucretius as a poet.
4. Discuss Vergil's attitude either to religion or to nature. Illustrate your remarks, where possible, from his works.
5. What qualities make Tacitus a great historian?

Queen's University Examinations : April, 1907.

## Latin Honours.

## PRELIMINARY AND FINAL.

## Translation at sight.

N.B.-(1) is for Final Honour candidates only,
(1) CA. actumst de me hodie. sed potes nunc mutuam drachumam dare unam mihi, quam cras reddam tibi?
Ps. uix hercle, opinor, si me opponam pignori.
sed quid ea drachuma facere uis? Ca. restim uolo mihi emere. Ps. quam ob rem? Ca. qui me faciam pensilem :
certumst mihi ante tenebras tenebras persequi.
Ps. quis mi igitur drachumam reddet, si dedero tibi?
an tu te ea caussa uis sciens suspendere,
ut me defraudes, drachumam si dederim tibi?
Ca. profecto nnllo pacto possum uiuere,
si illa a me abalienatur atque abducitur.
Ps. quid fles, cucule? uiues. Ca. quid ego ni fleam, quoi nec paratus nummus argenti siet neque libellai spes sit usquam gentium?
Ps. ut litterarum ego harum sermonem audio, nisi tu illi dacrumis fleueris argenteis, quod tu istis lacrumis te probare postulas, non pluris refert quam si imbrem in cribrum legas.

Plautus, Pseudolus, 85-102.
(2) clementia et probitas uostra, Quirites, quibus per ceteras gentis maxumi et clari estis, plurumum timoris mihi faciunt aduorsum tyrannidem L. Sullae, ne, quae ipsi nefanda existumatis, ea parum credendo de aliis circumueniamini, praesertim cum illi spes omnis in scelere atque perfidia sit neque se aliter tutum putet, quam si peior atque intestabilior metu uostro fuerit, quo captis libertatis curam miseria eximat aut, si prouideritis, in uitandis periculis magis quam ulciscendo teneamini. satellites quidem eius, homines maxumi nominis, optumis maiorum exemplis, nequeo satis mirari, qui dominationis in uos seruitium suum mercedem dant et utrumque per iniuriam malunt quam optumo iure liberi agere: praeclara Brutorum atque Aemiliorum et Lutatiorum proles, geniti ad ea, quae maiores uirtute peperere, subuortunda. nam quid a

Pyrrho, Hannibale, Philippoque et Antiocho defensum est aliud quam libertas et suae cuique sedes, neu cui nisi legibus pareremus? quae cuncta scaeuus iste Romulus quasi ab externis rapta tenet, non tot exercituum clade neque consulum et aliorum principum, quos fortuna belli consumpserat, satiatus, set tum crudelior, cum plerosque secundae res in miserationem ex ira uortunt.

Sallust, Hist. Fragm., Oratio Lepidi.
(3) haec uociferante Horatio cum decemuiri nec irae nec ignoscendi modum reperirent, nec quo euasura res esset cernerent, C. Claudi, qui patruus Appii decemuiri erat, oratio fuit precibus quam iurgio similis, orantis per sui fratris parentisque eius manes, ut ciuilis potius societatis, in qua natus esset, quam foederis nefarie icti cum collegis meminisset. multo id magis se illius causa orare quam rei publicae : quippe rem publicam, si a uolentibus nequeat, ab inuitis ius expetituram. sed ex magno certamine magnas excitari ferme iras; earum euentum se horrere. cum alios praeterquam de quo rettulissent decemuiri dicere prohiberent, Claudium interpellandi uerecundia fuit. sententiam igitur peregit nullum placere senatus consultum fieri. omnesque ita accipiebant, priuatos eos a Claudio iudicatos, multique ex consularibus uerbo adsensi sunt. alia sententia, asperior in speciem, uim minorem aliquanto habuit, quae patricios coire ad prodendum interregem iubebat. censendo enim quodcumque, magistratus esse qui senatum haberent iudicabat, quos priuatos fecerat auctor nullius senatus consulti faciendi.

Livy, 3. 40.
(4) Atqui si uitiis mediocribus ac mea paucis Mendosa est natura, alioqui recta...... Causa fuit pater his, qui macro pauper agello Noluit in Flaui ludum me mittere, magni Quo pueri magnis e centurionibus orti, Laemo suspensi loculos tabulamque lacerto, Ibant octonos referentes Idibus aeris, Sed puerum est ausus Romam portare docendum Artes quas doceat quiuis eques atque senator Semet prognatos. Vestem seruosque sequentes, In magno ut populo, si qui uidisset, auita Ex re praeberi sumptus mihi crederet illos. Ipse mihi custos incorruptissimus omnes Circum doctores aderat. Quid multa? Pudicum, Qui primus uirtutis honos, seruauit ab omni Non solum facto, uerum opprobrio quoque turpi ; Nec timuit, sibi ne uitio quis uerteret olim, Si praeco paruus aut, ut fuit ipse, coactor
Mercedes sequerer; neque ego essem questus. At hoc nunc

Laus illi debetur et a me gratia maior. Nil me paeniteat sanum patris huius, eoque Non, ut magna dolo factum negat esse suo pars, Quod non ingenuos habeat clarosque parentes, Sic me defendam. Longe mea discrepat istis Et uox et ratio.

Horace, S'at. I 6, 65-93.
(5) Sabinus ille, quem uidetis, hospites, Ait fuisse mulio celerrimus, Neque ullius uolantis impetum cisi Nequisse praeterire, siue Mantuam Opus foret uolare siue Brixiam.
Et hoc negat Tryphonis aemuli domum Negare nobilem insulamue Caeruli. Cremona frigida et lutosa Gallia, Tibi haec fuisse et esse cognitissima Ait Sabinus : ultima ex origine Tua stetisse dicit in uoragine, Tua in palude deposisse sarcinas. Sed haec prius fuere : nunc eburnea Sedetque sede seque dedicat tibi, Gemelle Castor et gemelle Castoris.

Vergil, C'atalepton X
Of what poem is this a parody? Quote as much of the original as you can.
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Queen's University Examinations: April, 1907.
HONOURS (PRELIMINARY AND FINAL).

## Latin.

Verse Authors.
[N.B. - Preliminary Honour Candidates are not required to answer 1. (2), but credit will be given for an answer to it. Question 6 (Ovid) is for Preliminary Honour students only.]
I. Vergil, Georgic $I$.
(I) Translate :

Saepe ego, sum flauis messorem induceret aruis agricola et fragili iam stringeret hordea culmo,
omnia uentorum concurrere proelia uidi, quae grauidam late segetem ab radicibus imis sublimem expulsam eruerent, ita turbine nigro ferret hiems culmumque leuem stipulasque uolantis.
Explain the construction of ferret.
(2) [Optional for Preliminary Honour Candidates. See note at top of page.]

Quote the description of a storm which immediately follows the above lines,

Or
Give the substance of lines I-42 of Georgic $I$ (the invocation) and consider their bearing on the question of Vergil's religious opinions.
(3) Scan the following lines, remarking on any metrical peculiarities :
(a) Ter sunt conati imponere Pelio Ossam.
(b) Glauco et Panopeae et Inoo Melicertae.
2. Vergil, Aeneid.
(I) Translate:
(a) Est in secessu longe locus : insula portum

Eticit obiectu laterum, quibus omnis ab alto
Frangitur inque sinus scindit sese unda reductos.
Hinc atque hinc uastae rupes geminique minantur
In caelum scopuli, quorum sub uertice late
Aequora tuta silent.
(b) Interea Aeneas socios de puppibus altis

Pontibus exponit. Multi seruare recursus
Languentis pelagi et breuibus se credere saltu,
Per remos alii. Speculatus litora Tarchon,
Qua uada non spirant nec fracta remurmurat unda,
Sed mare inoffensum crescenti adlabitur aestu,
Aduertit subito proram sociosque precatur:
${ }^{\text {'Nunc, }}$ O lecta manus, ualidis incumbite remis ;
Tollite, ferte rates ; inimicam findite rostris
Hanc terram, sulcumque sibi premat ipsa carina'.
State the context in which (b) occurs.
(2) Trace briefly the chief incidents in the story of the boxing match. What feelings about the combatants do you think Vergil meant to awaken in his readers?

## Or

What does Vergil represent the Spirit of Anchises as saying about the limitations and the true vocation of the Roman people? Quote as much of the Latin as you can.
(3) Punctuate and discuss the interpretation of ;

Heu miserande puer si qua fata aspera rumpas
Tu Marcellus eris.

## 3. Horace, Odes.

(1) Translate the following lines, and explain the allusions in the italicised words :

Milesne Crassi coniuge barbara
Turpis maritus uixit et hostium-
Pro curia inuersique mores !Consenuit socerorum in armis,

## 6. Ovid.

Translate and explain :
Carmentis portae dextra est uia proxima Iano:
Ire per hanc noli, quisquis es. Omen habet. Vt celeri passu Cremeram tetigere rapacem
-Turbidus hibernis ille fluebat aquisCastra loco ponunt, destrictis ensibus ipsi Tyrrhenum ualido Marte per agmen eunt.
7. Juvenal.
(I) Translate, adding notes on the words in italics:
(a) Cur timeam dubitemue locum defendere, quamuis Natus ad Euphraten, molles quod in aure fenestrae Arguerint, licet ipse negem? Sed quinque tabernae Quadringenta parant. Quid confert purpura maior Optandum, si Laurenti custodit in agro Conductas Coruinus oues, ego possideo plus Pallante et Licinis?
(2) Discuss the interpretation of:

Pone Tigellinum : taeda lucebis in illa
Qua stantes ardent qui fixo pectore fumant
Et latum media sulcum deducis harena.
(3) Explain the following passages in reference to their context or otherwise.
(a) De puluino surgat equestri.
(b) "Accipe et istud | Fermentum tibi habe".
(c). Iam friuola transfert | Vcalegon.
(d) Sibi consul | Ne placeat seruus curru portatur eodem.
(e) Adhuc uno parcam colit asse Mineruam.
(f) Tanti sanguinis ultor | Anulus.
(4) (a) Antoni gladios potuit contemnere, si sic Omnia dixisset.
Quote the line to which these words refer.
(b) "To point a moral, or adorn a tale". Johnson, Vanity of Human Wishes.
What words of Juvenal are here represented?

Sub rege Medo Marsus et Apulus Anciliorum et nominis et togae Oblitus aeternaeque Vestae, Incolumi Ioue et urbe Roma?
(2) Translate the following lines, and comment on any difficulty in syntax or reading :

> Scriberis Vario fortis et hostium

Victor Maeonii carminis alite,
Quam rem cumque ferox nauibus aut equis Miles te duce gesserit.
(3) Either (a) Give an outline of any one of the more playful Odes, and show the use Horace makes of mythological stories.

Or
(b) Write short notes on the syntax, interpretation or allusions in the following passages (which need not be translated).
(a)
$(\delta)$

Nunc Saliaribus
Ornare puluinar deorum
Tempus erat dapibus, sodales.
Troiae renascens alite lugubri Fortuna tristi clade iterabitur.

Diffidit urbium Portas uir Macedo et subruit aemulos Reges muneribus.
Da lunae propere nouae, Du noctis mediae, da, puer, auguris

Murenae: tribus aut nouem Miscentur cyathis pocula commodis.
4. Horace, Epistles. Book I.
(I) Translate the following passage :

Nos numerus sumus et fruges consumere nati, Sponsi Penelopae nebulones, Alcinoique
In cute curanda plus aequo operata iuuentus, Cui pulchrum fuit in medios dormire dies et Ad strepitum citharae cessatum ducere somnum.
Explain the allusions. Discuss the interpretation of the last line.
(2) Translate and explain : Nil admirari prope res est una, Numici, Solaque, quae possit facere et seruare beatum.
(3) Discuss the reading in the following passage:

Forte per angustam tenuis uolpecula rimam
Repserat in cumeram frumenti, pastaque rursus
Ire foras pleno tendebat corpore frustra.
Cui mustela procul 'Si uis' ait 'eff'ugere istinc,
Macra cauum repetes artum, quem macra subisti'.
(4) 'Ipse deus, simul atque uolam, me soluet'. Opinor, Hoc sentit : 'Moriar'. Mors ultima linea rerum est.
To what do these lines refer? Is Horace's interpretation correct?
(5) Me quater undenos sciat impleuisse Decembres Collegam Lepidum quo duxit Lollius anno.
What year is alluded to? Is the reading duxit right?

## 5. Catullus.

Translate :
Confestim Peneus adest, uiridantia Tempe,
Tempe, quae siluae cingunt super impendentes,
Magnessum linquens Doris celebranda choreis,
Non uacuus; namque ille tulit radicitus altas
Fagos ac recto proceras stipite laurus,
Non sine nutanti platano lentaque sorore
Flammati Phaethontis et aerea cupressu.
Haec circum sedes late contexta locauit,
Vestibulum at molli uelatum fronde uireret.
Post hunc consequitur sollerti corde Prometheus,
Extenuata gerens ueteris uestigia poenae,
Quam quondam silici restrictus membra catena
Persoluit pendens e uerticibus praeruptis.
Explain the allusion in the last four lines.

Queen's Unızersity Examinations : Aprıl, 1907.

## HONOURS.

## Latin.

## Prose Composition.

## Read into Latin Prose :

## 1. [For Preliminary and Final Honour Candidates].

But in Government, as in everything else, the danger is lest those who can do whatever they will, may will to do more than is for their ultimate interest. The interest of the people is to choose for their rulers the most instructed and the ablest persons who can be found ; and having done so, to allow them to exercise their knowledge and ability for the good of the people, under the check of the freest discussion and the most unreserved censure, but with the least possible direct interference of their constituents, as long as it is the good of the people, and not some private end that they are aiming at. A democracy thus administered would unite all the good qualities ever possessed by any government.

## 2. [For Preliminary Honour Candidates only].

For my own part, if I had little knowledge of the sea, yet I have thought it no shame to learn; and if I have made some few mistakes, it is only, as you can bear me witness, because I have wanted opportunity to correct them; the whole poem being first writien, and now sent you from a place, where I have not so much as the converse of any seaman. Yet though the trouble I had in writing it was great, it was more than recompensed by the pleasure; I found myself so warm in celebrating the praises of military men, two such especially as the Prince and General, that it is no wonder if they inspired me with thoughts above my ordinary level.

Dryden, Preface to Annus Mirabilis.

## 3. [For Final Honour Candidates only].

Although the novelties of the moderns were never disagreeable to our desires, who have always cherished with grateful affection those who devote themselves to study and who add anything either ingenious or useful to the opinions of our forefathers, yet we have always desired with more undoubting avidity to investigate the well-attested labours of the ancients.

For whether they had by nature a greater vigour of mental sagacity, or whether they perhaps indulged in closer application to study, or whether they were assisted in their progress by both these things, one thing we are perfectly clear about, that their successors are barely capable of discussing the discoveries of their forerunners, and of acquiring those things as pupils which the ancients dug out by difficult efforts of discovery. For as we read that the men of old were of a more excellent degree of bodily development than modern times are found to produce, it is by no means absurd to suppose that most of the ancients were distinguished by brighter faculties, seeing that in the labours they accomplished of both kinds they are inimitable by posterity.

Richard De Bury, Philobiblon.

Queen's University Examinations : April, 1907.

HONOURS.

## Latin.

## PRELIMINARY AND FINAL.

## Prose Authors.

(Questions 2 and 3 are not to be answered by Preliminary Honour Students. Final Honour Students must answer either Question 2 or Questions 1 and 3.)

## I. Cicero, Da Natura Deorum II.

(a) Translate c. 37, §§ 93, 94.

Hic ego non mirer esse quemquam, qui sibi persuadeat corpora quaedam solida atque indiuidua ui et grauitate ferri, mundumque effici ornatissimum et pulcherrimum ex eorum corporum concursione fortuita? Hoc qui existimat fieri potuisse, non intellego, cur non idem putet, si innumerabiles unius et uiginti formae litterarum uel aureae uel qualeslibet aliquo coiciantur, posse ex iis in terram excussis annales Ennii, ut deinceps legi possint, effici ; quod nescio an ne in uno quidem uersu possit tantum ualere fortuna. Isti autem quem ad modum adseuerant ex corpusculis non calore, non qualitate aliqua, quam тоьо́т $\tau \tau$ Graeci uocant, non sensu praeditis, sed concurrentibus temere atque casu mundum esse perfectum, uel innumerabiles potius in omni puncto temporis alios nasci, alios interire? Quodsi mundum efficere potest concursus atomorum, cur porticum, cur templum, cur domnm, cur urbem non potest? quae sunt minus operosa et multo quidem faciliora. Certe ita temere de mundo effutiunt, ut mihi quidem numquam hunc admirabilem caeli ornatum, qui locus est proximus, suspexisse uideantur.
(b) Write short notes on the italicised words.
(c) Who held the view alluded to in the first sentence?
(d) Write a short estimate of Cicero as a philosophical writer.
(e) Translate the following verses, mentioning the contexts in which Cicero quotes them, and naming the authors :
(1) Aspice hoc sublime candens, quem inuocant omnes Iouem

Tanta moles labitur
Fremibunda ex alto ingenti sonitu et spiritu. Prae se undas uoluit, uertices ui suscitat, Ruit prolapsa, pelagus respergit, reflat.

## 2. Cicero, De Oratore $I$.

## (a) Translate :

(i.) Satis est enim in ceteris artificiis perflciendis tantummodo similem esse hominis et id, quod tradatur uel etiam inculcetur, si quis forte sit tardior, posse percipere animo et memoria custodire. Non quaeritur mobilitas linguae, non celeritas uerborum, non denique ea quae nobis non possumus fingere, facies uoltus sonus. In oratore autem acumen dialecticorum, scientia philosophorum, uerba prope poetarum, memoria iuris consultorum, uox tragoedorum, gestus paene summorum actorum est requirendus.
(ii) Omnia fere, quae sunt conclusa nunc artibus, dispersa et dissipata quoudam fuerunt; ut in musicis numeri et uoces et modi ; in geometria lineamenta formae interualla magnitudines ; in hac denique ipsa ratione dicendi excogitare ornare disponere meminisse agere ignota quodam modo et diffusa late uidebantur. Adhibita est igitur ars quaedam extrinsecus ex alio genere quodam, quod sibi totum philosophi adsumunt, quae rem dissolutam diuolsamque conglutinaret et ratione quadam constringeret.
(b) Explain, with reference to the context and otherwise :
(1) Vetus atque usitata exceptio, ovivs peovniar dies filsiet.
(2) In mancipio lumina, uti tum essent, ita recepit.
(3) Ius applicationis.
(4) Quaesitum est num is ad suos postliminio redisset et amisisset hanc ciuitatem.
(5) Lapides mehercule omnis flere ac lamentari coegisses, ut totum illud vti lingya nunovpassit non in xii tabulis, quas tu omnibus bibliothecis anteponis, sed in magistri carmine scriptium uideretur.
(c) At what period of Cicero's life and under what circumstances was this dialogue written?
(d) What qualities and accomplishments does Crassus, maintain to be necessary for an orator? What is the view of his opponents?

## 3. Cicero, Philippic II.

Translate and explain :
Ecce Dolabellae comitiorum dies; sortitio praerogatiuae: quiescit. Renuntiatur : tacet. Prima classis uocatur ; renuntiatur ; deinde, ita ut adsolet, suffragia; tum secunda classis uocatur : quae omnia sunt citius facta quam dixi. Confecto negotio bonus augur-C. Laelium diceres-a liodie inquit. O impudentiam singularem! Quid uideras? Quid senseras? Quid andieras? Neque enim te de caelo seruasse dixisti, nec hodie dicis. Id igitur obuenit uitium, quod tu iam Kalendis Ianuariis futurum esse prouideras, et tanto ante praedixeras. Ergo hercule magna, ut spero, tua potius quam rei publicae calamitate ementitus es auspicia; obstrinxisti religione populum. Romanum ; augur auguri, consul consuli obnuntiasti.

## 4. Cicero, Letters 1-40 (Tyrrell).

Translate and explain in reference to the context and otherwise :
(a) Asiam qui de censoribus conduxerunt, questi sunt in senatu se cupiditate prolapsos nimium magno conduxisse: ut induceretur locatio, postulauerunt.
(b) Medius fidius ne tu emisti $\lambda o ́ \chi o \nu$ praeclarum : gladiatores audio pugnare mirifice. Si locare uoluisses, duobus his muneribus liber esses.
(c) Multa mecum de re publica, sane sibi displicens, ut loquebatur-sic est enim in hoc homine dicendum,-Syriam spernens, Hispaniam iactans : hic quoque, ut loquebatur, et, opinor, usquequaque, de hoc cum dicemus, sit hoc quasi

(c) Tantum metuo ne artificium tuum tibi parum prosit: nam, ut andio, istic
non ex iure manum consertum, sed magi' ferro rem repetunt.
(d) Ego nisi Bibulus, qui, dum unus hostis in Syria fuit, pedem porta non plus extulit quam domi domo sua, adniteretur de triumpho, aequo animo essem.

## 5. Tacitus, Histories I, Annals I, II.

## (i) Translate :

(a) Agebatur huc illuc Galba, uario turbae fluctuantis impulsu, completis undique basilicis ac templis, lugubri prospectu. Neque populi aut plebis ulla uox, sed attoniti uoltus et conuersae ad omnia aures; non tumultus, non quies, quale magni metus et magnae irae silentium est. Othoni tamen armari plebem nuntiabatur : ire praecipites et occupare pericula iubet. Igitur milites Romani, quasi Vologesum aut Pacorum auito Arsacidarum solio depulsuri ac non imperatorem suum inermem et senem trucidare pergerent, disiecta plebe, proculcato senatu, truces armis, rapidi equis forum inrumpunt. Nec illos Capitolii adspectus et inminentium templorum religio et priores et futuri principes terruere quo minus facerent scelus, cuius ultor est quisquis successit.
(b) Incendebat haec fletu et pectus atque os manibus uerberans. Mox disiectis quorum per umeros sustinebatur, praeceps et singulorum pedibus aduolutus tantum consternationis inuidiaeque conciuit, ut pars militum gladiatores qui e seruitio Blaesi erant, pars ceteram einsdem familiam uincirent, alii ad quaerendum corpus effunderentur. Ac ni propere neque corpus ullum reperiri, et seruos adhibitis cruciatibus abnuere caedem, neque illi fuisse umquam fratrem pernotuisset, hand multum ab exitio legati aberant. Tribunos tamen ac praefectum castorum extrusere, sarcinae fugientium direptae, et centurio Lucilius interficitur, cui militaribus facetiis "cedo alteram" indiderant, quia fracta uite in tergo militis alteram clara noce ac rursus alteram poscebat.
(2) (a) Give some account of Tacitus' religious opinions, illustrating them from his works :

Or (b) Criticise Tacitus' presentation of the character of Tiberius.
(3) Translate the following passages and explain them in reference to the context and otherwise :
(a) Finis Neronis uarios motus conciuerat, euolgato imperii arcano.
(b) Suscepere duo manipulares imperium populi Romani transferendum et transtulerunt.
(c) Flagitatum ut uacationes praestari centurionibus solitae remitterentur.
(4) Translate the following passages and explain anything noteworthy in the syntax :
$\int$ (a) Vt quemque adfluentium militum adspexerant, prensare manibus.
(b) Prout animum intendisset, prauus aut industrius eadem ui.
(c) Germanicus Aegyptum proficiscitur cognoscendae antiquitatis.

Queen's University Examinations : April, 1907.

## Latin Honours.

## EINAL.

## I. Plautus; Trinummus.

I. Translate:

Non sisti potest. Video caculam militarem me futurum haud longius. Vt aliquem ad regem in saginam erus sese coniexit meus, Credo ad summos bellatores acrem-fugitorem fore, Et capturum spolia ibi-illum qui ero meo aduorsus uenerit. Egomet autem quom extemplo arcum et pharetram et sagittas sumpsero,
Cassidem in caput,-dormibo placide in tabernaculo. Ad forum ibo: nudius sextus quoi talentum mutuom Dedi reposcam, ut habeam mecum quod feram uiaticum.
2. Explain the meaning of barbare, ferentarius, sine sacris hereditas, uorsoria, ad incitas reductus.
3. How is the date of this play indicated ?

## II. Lucretius.

I. Translate:

Illud item non est ut possis credere, sedes esse deum sanctas in mundi partibus ullis. tenuis enim natura deum longeque remota sensibus ab nostris animi uix mente uidetur ; quae quoniam manuum tactum suffugit et ictum, tactile nil nobis quod sit contingere debet : tangere enim non quit quod tangi non licet ipsum.
2. Scan the following lines, and point out the metrical peculiarities :
(a) Quidue tripectora tergemini uis Geryonai.
(b) Seorsum anima atque animus, tanto magis infitiandum.
3. What was the object of Lucretius in writing his poem?

## III. Vergil, Aeneid.

I. Translate :

Egressi superant fossas noctisque per umbram Castra inimica petunt, multis tamen ante futuri
Exitio. Passim somno uinoque per herbam Corpora fusa uident, arrectos litore currus, Inter lora rotasque uiros, simul arma iacere, Vina simul. Prior Hyrtacides sic ore locutus: Euryale, audendum dextra; nunc ipsa uocat res.
Hac iter est. Tu, ne qua manus se attollere nobis
A tergo possit, custodi et consule longe ;
Haec ego uasta dabo et lato te limite ducam.
Sic memorat uocemque premit; simul ense superbum
Rhamnetem aggreditur, qui forte tapetibus altis
Exstructus toto proflabat pectore somnum,
Rex idem et regi Turno gratissimus augur,
Sed non augurio potuit depellere pestem.
2. State the context in which these lines occur. Write short notes on the words in italics.
IV. Horace, De Arte Poetica.
i. Write short notes on the following :
(a) Tribus Anticyris caput insanabile numquam.
(b) Dic mihi, Musa, uirum, captae post tempora Troiae Qui mores hominum multorum uidit et urbes.
(c) Fit Choerilus ille.
(d) Neue minor neu sit quinto productior actu Fabula.........
Nec deus intersit, nisi dignus uindice nodus Inciderit.
2. Explain ampullae, scriptor cyclicus, cantor, inuita Minerua, morbus regius.
3. State very briefly what you consider to be the chief lessons inculcated in the Ars Poetica. Can (a) the prominence of tragedy in the poem, and (b) the attention paid to the satyric drama be justified ?
4. Quote, or, failing that, give the substance of what Horace says about the functions of the Chorus.
V. Quintilian, Inst. Orat. X.
I. What does Quintilian say about (a) Thucydides, (b) Sallust, (c) Ennius?
2. 'Satura tota nostra est'. Consider this statement in relation to the history of the satura till the time of Varro.
3. Translate, explain and criticise the following, with illustrations from your reading of Lucan :

Lucanus ardens et concitatus et sententiis clarissimus, et, ut dicam quod sentio, magis oratoribus quam poetis imitandus.

## VI. Pliny's Letters.

I. Translate, with explanatory notes :

Sed utcumque se habent ista, bene fecit Regulus quod est mortuus; melius, si ante. nunc enim sane poterat sine malo publico uiuere sub eo principe sub quo nocere non poterat. ideo fas est non numquam eum quaerere. nam postquam obiit ille, increbruit passim et inualuit consuetudo binas uel singulas clepsydras, interdum etiam dimidias et dandi et petendi. nam et qui dicunt egisse malunt quam agere et qui audiunt finire quam iudicare. tanta neglegentia, tanta desidia, tanta denique irreuerentia studiorum periculorumque est. an nos sapientiores maioribus nostris, nos legibus ipsis iustiores, quae tot horas, tot dies, tot comperendinationes largiuntur? hebetes illi et supra modum tardi, nos apertius dicimus, celerius intellegimus, religiosius iudicamus, quia paucioribus clepsydris praecipitamus causas quam diebus explicari solebant? o Regule, qui ambitione ab omnibus obtinebas quod fidei paucissimi praestant!

## 2. Translate ;

(a) Meritone eum qui haec de me scripsit et tunc dimisi amicissime et nunc ut amicissimum defunctum esse doleo? Dedit enim mihi quantum maximum potuit, daturus amplius, si potuisset. Tametsi quid homini potest dari maius quam gloria et laus et aeternitas? At non erunt aeterna quae scripsit: non erunt fortasse, ille tamen scripsit tamquam essent futura.

Of whom is Pliny speaking?
(b) Ab altero latere nubes atra et horrenda ignei spiritus tortis uibratisque discursibus rupta in longas flammarum figuras dehiscebat : fulguribus illae et similes et maiores erant.
3. In what context does Pliny use the following quotations? Indicate the original context and name the authors of $(b)$ and (c):
(a) Hic situs est Rufus, pulso qui Vindice quondam Imperium adseruit non sibi sed patriae.
(b) Quamquam animus meminisse horret, incipiam.
(c) Longo sed proximus interuallo.
4. "Paete, non dolet". In what circumstances were these words used, and by whom? Construct a genealogical tree of the most important members of Paetus' family, and mention very briefly the main characteristics which they had in common.
VII. Allen's Remnants of Early Latin.

Quei ápice insígne Diális fláminís gesístei, mors pérfecit tua ut éssent ómniá brèvia, honós famá virtúsque glória átque ingénium : quibús sei in lónga lícuisét tibe útier víta, facilé factés superáses glóriám maiórum. Quaré lubéns te in grémiu, Scípió, récipit terrá, Publí, prognátum Públió, Corvéli.
(a) Cumé tonás, Leucésie, praé tét tremónti, quóm tibeí cunei déxtumúm tonáront.
(b) Dívo mémpta cánte divóm deo súpplicate.

Queen's Unızersity Examinations : Aprıl, 1907.

## PRELIMINARY HONOURS.

## Greek.

Sophocles and Euripides.
I. Translate with notes :

Oedipus Coloneus, lines 864-875.
, 1225-1248.

Bacchae, lines 400-41I.

$$
\begin{gathered}
504-508 . \\
\text { 1058-1069. } \\
\text { I } 33 \text { I-I } 343 .
\end{gathered}
$$

2. Describe the calamities that befell the House of Laios.
3. Does the Bacchae consist with the usual attitude of Euripides towards the national mythology?

Queen's University Exammations : April, 1907.

## PRELIMINARY HONOURS.

## Greek.

## Thucydides and Plutarch.

I. Translate with short notes:

Thucydides II, chap. 87, §§ I, 2, 3, 4 .
Plutarch, Themistocles, chap. 32.
Pericles, chap. 6, §§ I, 2.
2. Illustrate and explain the economic troubles of early Greek states. How were they remedied?

$$
o r,
$$

Summarise the effects of the Persian Wars upon Greece.
3. What were the most striking features of the Spartan constitution? How do you explain the difference of Sparta from other Greek states?
4. Sketch the career of Alcibiades and compare his aims with those of Pericles.

Queen's University Examinatzons : April, 1907.

PRELIMINARY HONOURS.

## Greek.

## Prose and Translation at sight.

1. Translate Demosthenes' Olynthiac $I$. §§ 14, 15, 16.

## 2. Make into Greek :

While hunting with this patriot in a royal park near the city, the King of France was so captivated with the stranger's horse that he determined to possess it, and sent a messenger to ask the owner to name the price and deliver the animai. This was the king's way of buying auything on which he had fixed covetous eyes, and none ever presnmed to refuse him. Bnt this Englishman, to the surprise of the messenger and to the great indignation of the king, replied to the proposal that his horse was not for sale. The haughty monarch caused a liberal price to be counted out, and sent it to the Englishman with a positive order to accept the same and surrender the animal. An exile from his native land, where king and ministers were the paid servants of the French monarch, he seemed to have no choice but to obey. But this was a man of heroic type. With his own hand he killed the animal, saying "My horse was born a free creature, has served free men, and shall not be mastered by a king of slaves". Later he returned to his native land, having obtained pardon from the king; but after six years he was put to death for his opposition to the monarchical form of government.

Queen's U'niversity Examinations: April, 1907.

## FINAL HONOURS.

## Greek.

Thucydides, Herodotus, Demosthenes, Plutarch.
Translate with notes :
Thucydides, Book I, chap. 120.
Herodotus, Book VIII, chap. 137. Book IX, chap. 95.
Demosthenes, De Corona, §§ 297, 298, 299. Plutarch, Themistocles, chap. 20. Pericles, chap. 3.

Queen's University Examinations : April, 1907.

## FINAL HONOURS.

## Greek.

## Plato and Aristotle.

i. Translate :

Plato, Republic III, chap. 6.
$I$, chap. 5 .
Aristotle, Ethics, $X$, chap. 4, §§ 1, 2, 3, 4, 5 .
2. Comment on the precise use which Plato makes, in the Republic, of the analogy between the state and the individual.
3. Criticise the Platonic way of stating and proving the distinction between will and desire.
4. In seeking to define the good for man, what is the proper method of enquiry, according to Aristotle?

Queen's University Examinations : April, 1907. FINAL HONOURS.

## Greek.

Homer, Pindar, Aristophanes, Theocritus. Translate with short notes:

Homer, Odyssey XXI, 11. 285-310.
Pindar, Olympian VI, 11. 22-50.
Aristophanes, Birds, 11. 570-598.
Knights, 1050-1085.

Theocritus, Idyll VII, 11. 1-26.

Queen's University Examinations : April, 1907.

## PRELIMINARY HONOURS.

## Greek.

Aristophanes and Homer.
I. Translate with notes :

Aristophanes, Birds, lines 753-763.

$$
123^{8-125}
$$

Homer, Odyssey, Book V, lines 59-74. Book IX, lines 371-394.
2. Compare the Mutilation of the Hermae with the Gunpowder Plot.
3. What are the themes of the Old Comedy?

How do you account for its conservative bias and its audacity?
4. How does Homer picture Olympus and the deities who dwell there?

Queen's University Examinations : April, 1907.
FINAL HONOURS.

## Greek.

Aeschylus, Sophocles, Euripides.
Translate with notes:
Aeschylus, Agamemnon, 11. 551-582.
Prometheus, 11. 907-927.
Sophocles, Electra, 11. 430-463. Antigone, 11. 1033-1063.
Euripides, Bacchae, Il. II52-II8o.

# Queen's University Examinations : April, 1907. 

## FINAL HONOURS.

## Greek.

## Prose and Translation at sight.

## i. Translate Sophocles, Ajax, 1047-1078.

## 2. Make into Greek :

There are in this house, sir, many persons to whom I might, upon every principle of equity, fairness and reason, object as judges to decide upon my cause, not merely from their acknowledged enmity to me, to my friends, and to my politics, but from their particular conduct upon this particular occasion. To a noble lord who spoke early in this debate I might rightly object as a judge to try me, who from the fulness of his prejudice to me and predilection for my opponents, asserts things in direct defiance of the evidence which has been given at your bar. The noble lord repeats again that tricks were used at my side in the election, although he very properly omits the epithet which preceded that term when he used it in a former debate. But does it not appear in evidence that any tricks were practised on my part? Not a word. Against him, therefore, who, in the teeth of the depositions on your table, is prompted by his enmity toward me to maintain what the evidence (the ground this House is supposed to go upon) absolutely denies, I might object with infinite propriety as a judge in this cause.-Fox.

Queen's University Examinations: April, 1907.

## FINAL HONOURS.

## Greek.

GENERAL PAPER.
[N.B.-Six questions will be regarded as a full paper].

1. Discuss the value of discoveries in Greek lands for the interpretation of Homer.
2. Describe the cult of Dionysus and its importance in Greek religion.
3. Examine the political views of Aristophanes.
4. What are the merits and the defects of Thucydides as a historian?
5. Compare the theological opinions of Aeschylus and Euripides, and show how the difference of general attitude affects their art.
6. Sketch in outline the progress in poetry in Greece, giving the kinds of poetry, chief works, authors and approximate dates-down to 450 B.C.
7. Explain eight of the following terms :

ठıaıтทтท́s, $\pi \rho \circ \beta o u ́ \lambda \epsilon v \mu a, \dot{a} \nu \tau i ́ \delta o \sigma \iota s, ~ \in ̇ \chi i ̂ \nu o s, ~ \lambda \hat{\eta} \xi \iota \varsigma$,
 $\tau \iota \mu \eta \tau o ̀ s ~ a ̀ \gamma \omega ́ \nu, \pi a \rho a \gamma \rho a \phi \dot{\eta}, \dot{a} \pi a \gamma \omega \gamma \eta \prime$
8. Discuss the Sophists.
9. Describe the Athenian national character in the fifth century.
10. Explain the connection between Greek art and the national religion.

Queen's University Examinations : April, 1907.

PRELIMINARY, INTERMEDIATE AND FINAL.

## Deutsches Diktat.

Schon am nächten Tage schickte Manz einen Dienstbuben, ein Tagelöhnermädchen und sein eignes Söhnchen Sali auf den Acker hinaus, um das wilde Unkraut und Gestrüpp auszureuten und auf Haufen zu bringen, damit nachher die Steine um so bequemer weggefahren werden könnten. Dies war eine Enderung in seinem Wesen, dass er den kaum elfajhrigen Jungen, der noch zu keiner Arbeit angehalten worden, nun mit hinaussandte, gegen die Einsprache der Mutter. Es schien, da er es mit ernsthaften und gesalbten Worten that, als ob er mit dieser Arbeitsstrenge gegen sein eigenes Blut das Unrecht betäuben wollte, in dem er lebte, und welches nun begann, seine Folgen ruhig zu entfalten. Das ausgesandte Völkein jätete inzwischen lustig an dem Unkraut und hackte mit Vergnügen an den wunderlichen Stauden und Pflanzen aller Art, die da seit Jahren wucherten.

Queen's University Examinations : April, 1907.
PRELIMINARY INTERMEDIATE AND FINAL HONOURS.

## Zum Uebersetzen ins Englische.

Nota: Anfänger sollen nur A (a and b) übersetzen. A.
(a) Und Zarathustra lief und lief und fand Niemanden mehr und war allein und fand immer wieder sich und genoss und schlürfte seine Einsamkert und dachte an gute Dingestundenlang. Um die Stunde des Mittags aber, als die Sonne gerade über Zarathustra's Haupte stand, kam er an einem alten krummen und knorrichten Baume vorbei, der von der reichen Liebe eines Weinstocks rings umarmt und vor sich selber verborgen war : von dem hingen gelbe Trauben in Fulle dem Wandernden entgegen. Da gelüstete ihn, einen kleinen Durst zu löschen und sich eine Traube abzubrechen ; als er aber schon der Arm dazu ausstrechte, da gelüstete ihn etwas Anderes noch mehr: nämlich sich neben dem Baum niederzuelgen, um die Stunde des vollkommnes Mittags, und zu schlafen.

Dies tat Zarathustra; und sobald er auf dem Boden lag. in der Stille und Heimlichkeit des bunten Grases, hatte er auch schon seinen kleinen Durst vergessen und schlief ein. (Nietsche).
(b) Weise beraten war Auerbach ebenso, als er den Ton mündlicher Erzählung anschlug. Weniger vorbildlich wurde seine sparsame Anwendung der Mundart: in dieser Hinsicht haben Gotthelf und Reuter, Anzengiruber und Rosegger zum Heil der Kunst andere Wege eingeschlagen. Am heikelsten für jeden Volksschriftsteller und am gefährlichsten für Auerbach wurde seine Theorie und Praxis des Belehrens, des Besserns und des Bekehrens. Er liess es sich als freisprechender Erzähler nicht nehmen, an treu berichtete Begebenheiten Lebensregeln und allgemeine Bemerkungen zu knüpfen.

## B

Ebenfalls würden wir die Gegenwart besser würdigen und geniessen, wenn wir in guten und gesunden Tagen uns stets bewusst wären, wie in Krankheiten oder Betrübnissen die Erinnerung uns jede schmerz- und entbehrungslose Stunde als
unendlich beneidenswert. als ein verlornes Paradis, als einen verkannten Freund vorhält. Aber wir verleben unsere schönen Tage, ohne siekzu bemerken : erst wenn die schlimmen kommen, wünschen wir jene zurück. Tausend heitere, angenehme Stunden lassen wir mit verdriesslichem Gesicht ungenossen an uns vorüberziehen, um nachher zur trüben Zeit mit vergeblicher Sehnsucht ihnen nachzuseufzen. Statt dessen solten wir jede erträgliche gegenwart, auch die altägliche, welche wir jetzt so gleichgültig vorüberziehen lassen und wohl gar noch ungeduldig nachschieben-in Ehren halten, stets eingedenk, dass sie eben jetzt hinüberwallt in jene Apotheose der Vergangenheit, woselbst sie fortan, vom Lichte der Unvergänglichkeit umstrahlt, vom Gedächtnisse aufbewahrt wird, um , wenn dieses einst, besonders zur schlimmen Stunde, den Vorhang lüftet, als ein Gegenstand unsrer innigen Sehnsucht sich dargustellen. (Schopenhauer : Aphorismen zur Lebensweisheit).

## C.

## (Zum Uebersetzen ins Neuhochdeutsche.)

(a) Do hiez si Hagenen füeren an sîn ungemach, dâ er lac beslozzen unt dâ in niemen sach. Gunther der künec edele rüefen dô began ,,war kom der helt von Berne? der hât mir leide getân."

Dô gie im hin engegene der herre Dietrîch. daz Guntheres ellen daz was vil lobelîch : done beit ouch er nilit mêre, er lief her für den sal. von ir beider swerten huop sich ein grœzlîcher schal.
(b) Enti sprah im filu zuo in bîuurtim, quad : see, fuor ûz daer sâit sâan sînan sàmun. 4. enti mit diu aer sâta, sum fêlun uuege, quâmun fieogente, frâzun daz. 5. sum auh es feal in steinac, dâr herda ni hapta managa enti saar gênc ûph, huuanta haerda tiufin ni haptun, 6. sunnu ûph stîganteru arheigêtun enti huuanta uurzûn ni haptun, ardorrêtun.
(c) Jah jaindro usstandans quam in markom Judaios hindar Iaurdanau jah gaquemun sik aftra manageins du imma. jah, swe biuhts, aftra lasida ins.

Queen's University Examinations : April, 1907.

PRELIMINARY, INTERMEDIATE AND FINAL HONOURS,

## Deutsche Prosa.

[Nota: 1 und 2 sind für Anfänger ; 2, 3 und II für Senioren.]

## I.

1. One lady lent her some scores of Carlyle letters that have never been published, and crabbed was the writing, but though my mother liked to have our letters read aloud to her, she read every one of these herself, and would quote from them in her talk. Side by side with the Carlyle letters, which show him in his most gracious light, were many from his wife to a friend, and in one of these a romatic adventure is described-I quote from memory, and it is a poor memory compared to my mother's, which registered everything by a method of her own : 'What might be the age of Bell Tibbits? Well, she was born the week I bought the boiler, so she'll be one-and-fifty (no less!) come Martinmas.' Mrs. Carlyle had got into the train at a London station and was feeling very lonely, for the journey to Scotland lay before her and no one had come to see her off.
2. There are good reasons why creait should be used. Many widows, children, invalids, and others may have some wealth, but are unable or unwilling to undertake its management in active business enterprises. Others may have more wealth than than they need. On the other hand, there are many keen, energetic men naturally fitted for managing idustrial operations, who understand men, get on well with employés, and have hard-earned experience, but who may have little capital of their own to start with, or who can profitably. employ much more capital than they own.
3. We cannot grant the monopoly of cesthetic culture, so often claimed for the ancient classics. The very word "classics" itself is a sort of petrified expression of this fallacy. At the time when the title was bestowed, its appropriateness was beyond a doubt; but since the whole wealth of modern literature has been created, the title has ceased to be exclusively applicable, and ought no longer to be exclusively applied. When we speak of the great writers of England, Germany, France, Italy, and Spain-the term classics ought never to be
applied, even to the immortal productions of Greek or Roman fame, without the word "ancient" prefixed, by way of reservation in favour of modern classics, which also well deserve the name. . . . . . Without any disparagement of the ancient literature, however, we may maintain on the whole the superiority of the modern.

## II.

Themata zu einem deutschen Aufsatz (Man behandle nur eine) :
i. Warum studiert man die neueren Sprachen?
2. Was ist der Wert der Buchgelehrsamkeit?
3. Wer immer strebend sich bemüht, Den können wir erlôsen !
4. (a) Er war doch ein glücklicher Mann, weil er demütig war und Vertrauen hatte (Jörn Uhl). (b) Und wenn ihr euch auch selbst vertraut, Vertrauen euch die anderen Seelen (Faust).

Queen's University Examinations : April, 1907.

PRELIMINARY, INTERMEDIATE AND FINAL.

## Deutsche Poetische Literatur.

I.
i. Jeder der folgenden Auszüge ist in Zusammenhang mit seinem Werke zu bringen, die in Kursivschrift gedruckten Ausdrücke sind deutsch zu erklören und (c) u. (d) ausführlich zu kommentieren.

Hör', es splittern die S'äulen
Ewig grüner Paläste,
Girren und Brechen der Aeste,
Der Stämme mächtiges Dröhnen,
Der Wurzeln Knarren und Gähnen ;
Im fürchterlich verworrenen Falle
Uebereinander krachen sie alle,
Und durch die übertrümmerten Klüfte
Zischen und heulen die Lüfle!
Hörst du Stimmen in der Höhe?
(b) Bin ich der Flüchtling nicht, der Unbehauste, Der wie ein Wassersturz von Fels zu Felsen brauste, Der Unmensch ohne Zweck und Ruh,
Begierig wüthend, nach dem Abgrund zu?
Und seitwärts sie, mit kindlich dumpfen Sinnen,
Im Hüttchen auf dem kleinen Alpenfeld,
Und all ihr häusliches Beginnen
Umfangen in der kleinen Welt
(c) Ein Schauer fasst mich, Thräne folgt den Thränen, Das strenge Herz, es fühlt sich mild und weich; Was ich besitze, seh' ich wie im Weiten, Und was verschwand, wird mir zu Wirklichkeiten.
(d) Doch ihr, die echten Göttersöhne,

Erfreut euch der lebendig reichen Schöne ;
Das Werdende, das ewig wirkt und lebt, Umfass' euch mit der Liebe holden Schranken, Und was in schwankender Erscheinung schwebt, Befestiget mit dauernden Gedanken!
(e) Das Neue bringt herein mit Macht; das Alte, Das Würd 'ge scheidet ; andre Zeiten kommen, Es lebt ein anders denkendes Geschlecht. Was thu' ich hier? Sie sind begraben alle,
Mit denen ich gewaltet und gelebt.
Unter der Erde liegt meine Zeit ;
Wohl dem, der mit der neuen nicht mehr braucht zu leben!
( $f$ ) Auf dieser Bank von Stein will ich mich setzen,
Dem Wanderer zur kurzen Ruh, bereitet ;
Denn hier ist keine Heimat. Jeder treibt
Sich an dem andern rasch und fremd vorüber
Und fraget nicht nach seinem Schmerz.
(g) ,Umarme mich, mein Sohn!

Dir ist der härtre Kampf gelungen.
Nimm dieses Kreuz, es ist das Lohn
Der Demut, die sich selbst bezwungen."
( $h$ ) , , Von euch, ihr Kraniche dort oben,
Wenn keine andre Stimme spricht,
Sei meines Mordes Klag' erhoben!"،
Er ruft es, und sein Auge bricht.
2. Was ist die Beziehung auf des Dichters Leben in (b) ?
3. Was ist das Allgemeingültige in $(e),(f) \mathrm{u} .(\mathrm{g})$ ?

## II.

I. ,, Du wirst mein Freund für deine Sinnen In dieser Stunde mehr gewinnen, als in des Jahres Einerlei."
(a) Nenne man diese Sinne, sowie das, was für sie der Freund geroinnt. Was ist der Zweck des versprochenen Gewinns?
2. ,,Entbehren sollst du, sollst entbehren, Das ist der ewige Gesang, "
(a) Characteriziere man diese und die vorhergehenden Stimmungen Fausts unter Bezeichnung ihrer Motivation.
(b) Inwiefern sind die oben zitierten Worte als vorübergehende Stimmungsreflexe, als für den folgenden Lauf der Handlung gültig oder als allgemeingültig zu betrachten?
3. Vergleiche man Wagner mit Faust unter Rücksicht auf Fausts Stimmung beim ersten Gespräch, sowie auf ihre spätere Leistungen. Oder,
4. Was ist Mephistopheles? Oder,
5. Welche philosophische u. religiôse Anschauungen kommen in ,,Faust" vor? Oder,
6. Vergleiche man die drei Schwerpunkte des Gedichtes.
7. Bespreche man kurz Form, Inhält und besonderen und allgemeinen Zweck von ,,Wilhelm Tell."
8. Tragen die Naturschilderungen dieses Stückes zur Hauptidee bei und wie? Oder.
9. Welche Spuren von Shakespeare sind vorhanden? Oder,
10. Wieviel ist historisch, gedichtet oder sagenhaft? Auf welcher Mythe beruht das Sagenhafte?
ir. Wie dichtete Gœthe u. Schiller ihre Balladen. Stelle man einen Vergleich zwischen ihre Arten, die Stoffe zu wählen und zu behandeln.
12. Schreibe man den ,,Fischer" oder,,Den König in Thuler nieder; und gebe man den Inhalt der ,,Johanna Sebus'" oder des Ritter Toggenburg an.

Queen's University Examnations : April, 1907.

PRELIMINARY, INTERMEDIATE AND FINAL HONOURS.

## Deutsche Prosaische Literatur.

## I.

I. Der Zusammenhang folgender Auszüge mit ihren Werken ist zu bezeichnen ; die in Kursivschrift gedruckten Ausdrücke sind deutsch zu erklären und (c) allgemein zu besprechen.
(a) Herr mein Gott, betete sie, lass ihn draussen in der Fremde eine Mutter finden, die ihm beisteht in aller Noth, und wenn Niemand sich seiner mehr erbarmt, lass ihn den Weg zu seiner rechten Mutter zurückfinden, dass ich nicht sterbe, eh' ich seine Hand in meiner gehalten habe!
(b) Ich wett', was Einer will, sagte die witzige Gretel, der Fuchs hat sich in die Erde vergraben und lauert uns auf. Dir. thut er freilich nichts zu Leid. Uns aber vergisst er's nimmer, dass wir's gesehen und dazu gelacht haben, wie er mit dem. Purzelbaum abgefahren ist.
(c) Mir aber scheint, dass der Tod, wenn er Jugend und Schönheit hinrafft, selbst zum Dichter wird, der das Vollkommene in unserm Andenken verewigt und das Liebenswürdige vor dem Raub der Zeit beschützt. Das Leben ist roh und gewaltsam. Ueber kurz oder lang zwingt es auch die zarteste Gestalt unter das harte Joch der irdischen Noth und Nothwehr. Der Tod, wenn er an die Jugend herantritt, lüftet ihr nur die Flügel, ehe sie geknickt werden. Wer sich nicht damit versöhnen kann, dass der Sturm im Frühling Blüthen zu Tausenden von den Bäumen reisst, ehe sie Frucht angesetzt der lasse deise Geschichte ungelesen.
(d) Jhre lachende Freundin beurteilt Ihre Umstände weit richtiger als Sie selbst. Weil sie verabschiedet sind, nennen Sie sich an Ihrer Ehre gekränkt; weil sie einen Schuss in dem Arme haben, machen Sie sich zu einem Krüppel. Ist das so recht? Ist das keine Ubertreibung? Und ist es meine Einrichtung, dass alle Ubertreibungen des Lächerlichen so fähig sind? Ich wette, wenn ich Ihren Bettler nuu vernehme, dass auch deiser ebensowenig Stich halten wird. Sie werden einmal, zweimal, dreimal Ihre Equipage verloren haben; bei
dem oder jemen Bankier werden einige Kapitale jetzt mit schwinden ; Sie werden diesen oder jenen Vorschuss, den Sie im Dienste getan, keine Hoffnung haben, wieder zu erhalten.
(e) ,,Du," sagte er, ,,du sagst, der Schneider hat Blech geredet? Aber denn sage mir 'mal: Wie ist das mit dir selbst? Du arbeitest für nichts und wieder nichts in diesem oden Hause, wo drei Trinker ohne Sinn und Verstand darauf loswirtschaften, und plackst dich täglich mit den widerhaarigen Mädchen?
2. Erkläre man auf Deutsche folgende Wendungen:

Vergreife dich nicht. -Ihr müsst euch euer Brot auf den Stoppeln suchen.-Ein mann der, mit sich nicht spassen lässt. - Sie halten jedem Uhl vor, was er im Laufe des Jahres verbrochen hat.-Lass dein Reden sein.-Aber so leichten Kaufes kam er nicht davon. - Im Wagen muss der Herr Major Katz aushalten.-Aber warum stehe ich an, es (Schreiben) zu erbrechen.

## II.

r. Wie führt Lessing seine Reformen des deutschen Dramas in ,,Minna von Barnhelm" im Vergleich mit ,,Emilia Galotti'‘ aus?
2. Was ist das Spezielle und was, das Allgemeinmenschliche in ,,Minna"?
3. ,,Denn wir hoffen, an allen Ecken und Enden zu zeigen, dass die Mühe, die unsere Menschen sich machen, der Mühe wert gewesen ist."

In welchem Sinne wird Mühe hier gebraucht? Zeige man kurzgefasst, wie unser Dichter sein Vorhaben ausführt.
4. Was ist in ,,Jörn Uhl" sowie in ,,Faust" ,,der Weisheit letzter Schluss"? Stelle man allgemein u. unter Verweisung auf die in Betracht kommenden Stellen einen Vergleich zwischen beide Werke.
5. Was ist der Unterschied zwischen der Novelle und dem Roman?
6. Was ist Paul Heyses Kunsttheorie ? Wie wird sein eigenes Leben darin abgespiegelt? Zeige man an irgend einer beliebigen Novelle bezüglich deren Aufbaus, Stils und Inhalts an, wie er diese Theorie verwertet?
7. Was ist das Märchen? Gebe man die Titel fünf Baumbachischer Märchen an, die nach dieser Definition abgefasst sind ?
8. Die Inhaltsangabe von zwei der in der Antwort auf Frage 7 erwähnten Märchen wird ersucht.

Queen's University Examinations : April, 1907.
PRELIMINARY, INTERMEDIATE AND FINAL. Geschichte der deutschen Literatur.

1. Es sind zwei von den folgenden Gegenständen kurz zu behandeln :
(a) Die Entstehung und Entwickelung der Komödie bis zur Gegenwart.
(b) Die Entstehung und Entwickelung der Novelle bis zur Gegenwart.
(c) Der Zustand der deutschen Literatur in der ersten Hälfte des i8ten Jahrhunderts.
2. Skizziere man unter Angabe einer allgemeinen Würdigung das Leben und die Werke von entweder Lessing oder Herder oder Wieland. Vergleiche man alle drei.
3. Gebe man in grossen Zügen den Lebensgang Goethes unter Erwähnung seiner Hauptwerke nebst allgemeiner Schätzung seines Wertes als Dichter an.
4. Es wird ersucht, einen kurzen Ueberblick über die verschiedenen Bewegungen in der deutschen Literatur von der Mitte des i8ten Jahrhunderts bis zur Gegenwart unter allgemeiner Bezeichnung von jeder und Erwähnung ihrer gegenseitigen Verhältnise zu werfen. Was ist das Dauernde in diesem Wechsel?
5. Welcher Rang gebührt Freytag, Scheffel und Paul Heyse in der deutschen Literatur? Eine Skizze des Lebenslaufs und der literarischen Tätigkeit von irgend einem unter ihnen.
6. Entstehung und Entwickelung des Musikdramas bis zu Richard Wagner's Tod.
7. Anmerkungen über: Der Hainbund, Merck, Jean Paul Richter, Jacobi, Novalis, Bettina von Arnim, Geibel, Nietzsche, Gerhard Hauptmann.

Queen's University Examinations : April, 1907.

## INTERMEDIATE AND FINAL.

## Prosaische Literatur,

Nota.-Intermediär-Kandidaten wollen nur die sie angehenden Stücke und Fragen behandeln.

## I.

(a)

Mich Euch zum Christen macht, das macht Euch mir Zum Juden !-Aber lasst uns länger nicht Einander nur erweichen. Hier braucht's That!
(b) Noch Einen ! reiche mir aus Lethe's Fluthen Den letzten kühlen Becher der Erquickung! Bald ist der Krampf des Lebens aus dem Busen Hinweggespült ; bald fliesset still mein Geist, Der Quelle des Vergessens hingegeben, Zu euch, ihr Schatten, in die ew'gen Nebel.
(c) So hat man mich bekränzt, um mich geschmückt Als Opferthier vor den Altar zu führen! So lockte man wir noch am letzten Tage Mein einzig Eigenthum, mir mein Gedicht Mit glatten Worten ab, und hielt es fest!
(d) -Des Menschen Thaten und Gedanken, wisst, Sind nicht, wie Meeres blind bewegte Wellen. Die innre Welt, sein Mikrokosmus, ist Der tiefe Schacht, aus dem sie ewig quellen. Sie sind nothwendig, wie des Baumes Frucht, Sie kann der Zufall gaukelnd nicht verwandeln,
(e) Ich habe drauf geharret-Jahre lang

Mich drauf bereitet, alles hab' ich mir Gesagt und ins Gedächtnis eingeschrieben, Wie ich sie rühren wollte und bewegen!

1. Oben zitierte Stellen sind in Zusammenhang mit der Handlung u. Idee ihrer Werke zu bringen und $(a),(b),(d) \mathrm{zu}$ kommentieren und allgemein zu besprechen.
I. Vergleiche man ,,Maria Stuart" und ,,Die Jungfrau" mit Bezug auf (a) das Tragische und (b) den Aufbau.
2. Was ist der tragische Wendepunkt in ,,Der Jungfrau"? Wie wird er motiviert? Oder,
3. Wunder dulden wir da nur in der physikalischen Welt, in der moralischen muss alles seinen ordentlichen Lauf behalten (Lessing).

Wann gebraucht Schiller das Wunder in ,,der Jungfrau"? Wie beobachtet er die oben zitierten Lessing'schen Gesetze?
4. Wie zeigt der Dichter in ,, Maria Stuart'" sowie in ,,Der Jungfrau'‘ das Umschlagen der Gegensätze in einander? Oder,
5. Wann u. wie entstand ,,Faust II"? Oder,
6. Wie entstand der,,Trompeter von Säkkingen"? Vergleiche man das Gedicht mit dem vorbildlichen Stoff und des Dichters Leben.
7. Deute man: $(A)$ unter Angabe des Zusammenhangs,
(a) In deinem Nichts hoff' ich das All zu finden.
(b) Das Schaudern ist des Menschen bester Teil.
(c) Das Was bedenke, mehr bedenke Wie.
(d) Den lieb' ich der Unmögliches begehrt.
(e) Die Tat ist alles, nichts der Ruhm.
(B) Die Mütter, Homunculus, Euphorion, Fausts Himmelfahrt.
8. Zitiere man die Schlussworte des ,,Faust II," und erkläre man sie unter Beziehung auf verwandte Stellen im Gedicht?
9. Wie lassen sich ,,Nathan der Weise' und ,,Iphigenie' ${ }^{\text {' vergleichen ? }}$

Io. Unterscheide man zwischen Vernunft und Verstand, wie sie im ,,Faust'" gebraucht werden. Unterscheide man auch zwischen Determinismus u. Indeterminismus, und sage man welcher von beiden im Leben herrscht, oder inwiefern beide herrschen. Verweise man dabei auf Goethes, Schillers und Shakespeares Standpunkt?

## III.

Nota.-Beantworte man drei der folgenden Fragen.
I. Wie hat Schiller die Wahrscheinlichkeit des grossen Posaund Königauftrittes im 2ten Aufzug seines Don Carlos ermöglicht? Besprechen Sie diesen Auftritt?
2. Welchen weitverbreiteten Gedanken des i8ten Jahrhunderts lässt Schiller seinen Posa Ausdruck geben?
3. Welchen Entwickelungsgang hat Schiller von den ,,Räubern'" bis zum ,,Carlos" durchgemacht?

4, •Wie gewinnt ,, Wallenstein's Lager' eine Einheit? Welcher Gattung der Dichtkunst gehört es?
5. Wie unterscheidet sich die Rolle der Idealisten in ,,Wallenstein" von der, die sie in ,,Don Carlos" spielen?
6. Worin besteht die eigentliche Tragik des ,,Wallenstein"?

# Queen's University Examinations : April, 1907. 

## INTERMEDIATE AND FINAL.

## Deutsche Prosaische Literatur.

Nота.-Intermediär-Kandidaten wollen nur die sie angehenden Auszüge und Fragen behandeln.
I.
(a) Jetzt wurde er allmälig mit dem Gedanken vertraut, das Geld zur Anlage seiner Fabrik von Fremden zu nehmen. Nur Eines widerstand seinem Stolz, den zuvorkommenden Ehrenthal als Theilnehmer zu ertragen ; so weit wirkte der Brief des undeutlichen Schreibers.
(b) Alle Qual der Verdammten fühlte er jetzt, wo er tastend, mit den Händen fühlend, durch Wasser und Regen den Weg der Rettung suchte. Er klammerte sich an das schlüpfrige Holz der Pfähle, um nicht zu sinken. Er stand an der Treppe des Nachbarhauses, er fühlte nach den Schlüsseln in seiner Tasche, noch ein Schwung um die Ecke, und sein Fuss berührte die Stufen der Treppe.
(c) Kind! Kind! Nicht weiter! Wie von unsichtbaren Geistern gepeitscht, gehen die Sonnenpferde der Zeit mit unsers Schickfals leichtem Wagen durch, und uns bleibt nichts als muthig gefaszt, die Zügel festzuhalten und bald rechts, bald links, vom Steine hier, vom Sturze da, die Räder wegzulenken. Wohin es geht, wer weiss es? Erinnert er sich doch kaum, woher er kam !
(d) Stecken Sie beiseite! geschwind beiseite !-Mir wird die Gelegenheit versagt, Gebrauch davon zu machen. Ihnen wird sie nicht fehlen, diese Gelegenheit: und Sie werden sie ergreifen, die erste, die beste, -wenn Sie ein Mann sind.-Ich, ich bin nur ein Weib: aber so kam ich her! fest entsch-lossen!-Wir, Alter, wir können uns alles vertrauen. Denn wir sind beide beleidiget; von dem nämlichen Verführer beleidiget.
(e) Das Heldenlied aber, das von allen sterblichen Wesen zuerft die Bärin auf der Sigelsalp vernommen, hat der Schreiber dieses Buches zur Kurzweil an langen Winterabenden in deutschen Reim gebracht, und wiewohl sich schon mancn' anderer wackerer Verdeutscher derselden Aufgabe beflissen, so darf er's doch im Zusammenhang der Geschichte dem Leser nicht vorenthalten, auf dass er daraus ersehe, wie im zehnten Jahrhundert ebenso gut wie in der Folge der Zeiten der Geist der Dichtung sich im Gemüth erlesener Männer eine Statte zu bereiten wusste.
i. Bezeichne man den Zusammenhang der oben angeführten Stücke mit ihren Werken. Auch erkläre man die in Kursivschrift gedrucken Worte. Dazu deute man (c), und gebe man kurz den Inhalt des Heldenlieds (e) an.
2. Wie sind ,,Soll und Haben" und ,,Jörn Uhl" behufs des Wertes der Arbeit u. des Werdegangs beider Helden zu vergleichen?
3. Welche Beziehungen zu ,,Faust" sind in ,,Soll und Haben" verweisbar?
4. Beim Schaffen seines ,,Egmont" wie verfuhr Gœthe den historischen Verhältnisen und Personen gegenüber? Seine Gründe dazu? Oder,
5. Wogegen $u$. wie darf ,,Egmont" seitens des Verfassers als dichterisches Selbstheilungsmittel angesehen werden ?
6. Was ist eine Charaktertragödie? Inwieweit mit besonderem Hinweis auf die Katastrophe ist ,,Emilia Galotti" eine?
7. Inwiefern war der Stoff zu ,,Gelimer" schon dichterisch? Was hat der Verfasser noch Dichterisches hinzugefügt? Eine kurze Inhaltsangabe.
8. Was ist das Lösungswort in ,,Ekkehard" und wie wird es verwendet? Verweise man auf Ahnliches in andern gelesenen Werken.
9. Was ist Lessings Meinung von der Schilderung in der Literatur? Verweise man auf besonders auffallende Schilderungen in ,,Ekkehard", ,,Gelimer" und ,,Soll u. Haben" unter Besprechung ihres künstlerischen Wertes.

Queen's University Examinations : Aprul, 1907.

## INTERMEDIATE AND FINAL.

## Deutsche Philologie.

## I.

I. Uebersetze man ins Neuhochdeutsche :
(A) 1. Aftra hausideduth thatei quithan ist thaim airizam : ni ufarswarais, ith usgibais fraujin aithans theinans. Aththan ik qitha izwis ni swaran allis, ni bi himina, unte stols ist gudis; nih bi airthai, unte fotubaurd ist fotiwe is, nih bi Iairusaulymai, unte baurgs ist this mikilins thiudanis; nih bi haubida theinamma swarais, unte ni magt ain tagl hweit aiththau swart gataujan. sijaith-than waurd izwar : ja, ja; ne, ne ; ith thata managizo thaim us thamma ubilin ist.
2. Insaihwith du fuglam himinis, thei ni saiand nih sneithand, nih lisand in banstins, jah atta izwar sa ufar himinam fodeith ins. niu jus mais wulthrizans sijuth thaim? ith hwas izwara maurnands mag anaaukan ana wahstu seinana aleina aina? (Nur für Final-Kandidaten).
(B) 1. So denne der mahtigo khuninc daz mahal kipannit, dara scal queman chunno kilihaz: denne ni kitar parno nohhein den pan furisizzan, ni allero manno uuelih ze demo mahale sculi ; dar scal er vora demo rihhe az rahhu stantan, pi daz er in uuerolti eo kiuuerkot hapeta.

$$
\begin{aligned}
& \text { 2. Nu uuill ih scriban unser héil, euangéliono deil, } \\
& \text { so uuír nu hiar bigúnnun, } \\
& \text { Thaz síe ni uuesen éino thes selben adeilo, } \\
& \text { ni man in íro gizungi } \\
& \text { Kristes lób sungi, } \\
& \text { Ioh er ouh íro uuorto } \\
& \\
& \\
& \text { gilóubon sinen ládota. } \\
& \text { (Nur für Final-Kandidaten.) }
\end{aligned}
$$

(C) Die dâ torsten vehten, die lâgen alle erslagen. den schaz den hiez er balde füeren unde tragen dâ in dâ vor dâ nâmen die Nibelunges man. Albrîch der vil starke dô die kameren gewan.
Er muos im sweren eide er diente im sô sîn kneht. aller hande dinge was er im gereht." sô sprach von Tronege Hagene. ,, daz hât er getân : alsô grôzer krefte nie mêr recke gewan.

Noch weiz ich an im mêre daz mir ist bekant. einen lintrachen sluoc des heledes hant. er badet sich in dem bluote : sîn hût wart hurnîn. des snîdet in kein wâfen : daz ist dicke worden schîn.
2. Gebe man in Nhd., Mhd, Ahd. u. G. die Hauptformen von lägen, hiez, tragen, nâmen, gevvan, muos, was, hat, getan, snîdet, an, auch dazu (in denselben benannten Sprachen) das ganze Präsens zu was und das Perfektum von muos. Was lässt sich beim letzten Verbum philologisch bemerken.
3. Dekliniere man in denselben Sprachen : schaz (G. Skatts [m.], Ahd sca7. [m.]) man, hant, bluote (G. bloth [n.]), er.
4. Welches Gesetz lässt sich vom obigen Vergleich (3) feststellen? Wie entspricht es dem beim ersten Werden der Sprache herrschenden Gesetz?
5. Sîn, hût, wafen, tragen (c) Wie haben diese Vokallaute sich beim Uebergehen ins Nhd. verwandelt.

## II.

1. Was ist die 2te Lautverschiebung? Wann ist sie entstanden $u$. wo hat sie sich erstreckt? Was ist die jetztige Grenze zwischen Hoch- und Niederdeutsch?
2. Was hat die Literatur der ersten Blüteperiode zu ihrem Höhepunkte befördert?
3. Zeige man durch eine kurze Inhaltsangabe die verschiedenen Sagenkreise sowie die christlicken u. mythischen Elemente, die im Niebelungenlied verflochten sind.

## HONOURS.

## French.

## Dictation.

Lorsque l'on m'enseignait en ma jeunesse,-il y a longtemps de cela!-l'histoire de la philosophie, et en particulier celle de la philosophie scolastique, on ne manquait pas, Messieurs, d'acquitter au saint Thomas et au saint Bonaventure le tribut d'admiration auquel ils avaient droit, mais on ne manquait pas non plus d'ajouter qu'à vrai dire leur philosophie n'en était pas une, puisqu'elle dépendait de leur théologie, et que toutes les solutions en étaient prévues ou commandées. Eh bien! Messieurs, si les solutions de la philosophie étaient alors commandées par la théologie, elles ne le sont plus, j'en conviens, mais j'ose avancer qu'elles n'en sont pas pour cela moins commandées ni moins prévues. La philosophie fera-t-elle encore des découvertes? Je le souhaite pour elle, et aussi pour nous. Mais ce qui me frappe dans son histoire, c'est que, depuis tantôt trois ou quatre questions qui nous intéressent, - telles que la question de nos origines ou celle de notre destinée, -la philosophie, toutes les philosophies, depuis trois ou quatre mille ans, n'ont pas donné, tout compte fait, plus de trois ou quatre réponses.

Oh! je sais bien qu'on me dira qu'il y en a davantage! et on me reprochera de méconnaître ce que tant de belles constructions métaphysiques, tant de beaux et vastes "palais d’idées", ont eu d'original ou de personnel à leurs auteurs. Et, je le dirai donc moi-même, je ne le méconnais point!

Brunetière "Discours de Combat."

Queen's University Examinations : April, 1907.

## PRELIMINARY HONOURS.

French-The Language and its History.
[B is for intra-mural students only. C for extra-mural students only].

## A.

I. Give the principal parts of conquérir, hair, moudre, luire, plaire.
2. Give with examples the rules for the formation of adverbs. What is the position in the sentence of French adverbs?
3. Explain why in French adjectives usually follow their nouns.
4. Why should the plural of French nouns end in-s? Give the exceptions.
5. Distinguish between : savoir, connaître ; les uns les autres, l'un et l'autre ; un grand homme, un homme grand ; du, dû ; cru, crû ; dégoûter, dégoutter ; auparavant, avant, devant.
6. Translate into French :
(a) How easy it is to make a grammatical mistake.
(b) I say, Charles, we have just had a fine game of cricket.
(c) She has unfortunately burnt her finger.
(d) Get up quickly and dress; you will be late for breakfast.
(e) The more we learn, the more we feel our ignorance.
( $f$ ) Men are equal ; virtue make the difference.

## B.

1. Explain what is meant by an "open" and a "closed" vowel ; the "strong" and "weak" position of a consonant.
2. What is the difference between voice and breath?

3 Explain briefly the meaning of "Analogy," "Assimilation," "Tonic Accent," with French examples.
4. Give a brief history of the development of the language from A. D. roo-1400.
5. Show briefly how French may be called "shortened Latin."

## C.

1. What are the terminations of French Diminutives?
2. Explain the apostrophe in grand'mère and the " t " in parle-t-il.
3. Distinguish between ; la lecture, the lecture ; attendre, to attend ; agréer, to agree ; and translate the word "country" and "time" in as many ways as you can, showing the difference of use of the various French words.
4. How is the English Passive translated into French ? Give examples.
5. Translate : entente cordiale; nonchalance; juste mileu ; laisser-faire ; cela vient à point ; raison de plus; il l' a pris à la volée ; vous ne savez rien de rien ; menus plaisirs ; prendre la lune avec les dents ; vous n'en pouvez mais ; bon gré, mal gré ; mêle-toi de tes affaires.

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## HONOURS.

French.

## Prose Composition.

[Preliminary Honours are to try Questions 1 and 2; other Honours, 1 and 3.]

## I. Translate into French :

We have just made an emperor, and for my part I have not put any obstacles in the way. Here is the story. This morning D'Anthouard calls us together, and informs us of the matter to be considered, but in a plain way, without preamble or peroration. "An emperor or a republic, which is more to your liking? ?", just as people say, " Roast or boiled, what will you have?" When his speech is finished we all look at each other, sitting in a circle. "Gentlemen, what is your opinion?" Not a word; nobody opens his mouth. This lasted a quarter of an hour or more, and was becoming embarrassing for D'Anthouard and for everybody, when Maire, a young man, a lieutenant you may have seen, got up and said-"If he wishes to be an emperor let him be one ; but, to say what I think, I don't approve of it at all." "Explain yourself," said the colonel ""Do you wish it or do you not wish it ?"" "I don't wish it, " answered Maire. "Well and good !" A fresh silence. We begin again to look at each other, like people who see each other for the first time. We should be still there if I had not spoken. "Gentlemen," I said, "it seems to me that, subject to ccrrection, this does not concern us. The nation wishes an emperor. It is for us to discuss the matter."

## 2. Translate into French :

Provincial feeling is not so strong in England as it is in France. The words used in the two countries are in themselves an indication of this. The word pays as employed by journalists and politicians for the whole of France, is exactly equivalent to "the country" as employed by English politicians; but the word pays, as it is employed by a French peasant to mean locality to which he is bound by ties of birth and affection, has no equivalent in English, and it cannot be translated without a phrase. To get the force of it, I must explain that it is a part of the country to which $I$ and my
family belong. But the greatest difference in language is the entire absence, in English, of any word having the peculiar emotional value, the sacredness of patrie.

## 3. Translate into French :

It is on record that during the seven years' war, Frederick the Great politely but firmly declined the services of some young Englishmen who begged to be allowed to learn the art of war under his orders, a prime reason of the King's refusal being a fear lest their extravagant way of living should corrupt the manners of the frugal Prussian officer. Now, a century and a half after Rosbach and Leuthen, the Emperor William has to complain of luxurious habits among his own officers, who are moreover so lacking in true patriotism as to drink "French Champagne." His Majesty is said to push nationalism to such an extent as to take coffee with milk after dinner from a notion that black coffee is peculiarly French. After all, his idea of a simple menu for a mess dinner is fairly liberal ; and most of us could make shift to do with "soup, fish, joint, vegetables, and cheese, with plain red or white table wine, and a glass of German champagne with the joint." As to the nature of the wine to be drunk with the roast the land of sparkling Hock and Moselle can dispense at a pinch with "the foaming grape of Eastern France." The most serious threat to military conviviality in the future is the reported teetotalism of the Crown Prince.

## preliminary, Intermediate and Final Honours.

## French Literature 1.

[Preliminary Honours to try in B only five questions ; other Honours only four].

## A.

Traduisez en anglais les extraits suivants :
(1) C'est un spectacle étrange de voir à la lueur azurée et rose du matin ce cadavre de ville saisie au milieu de ses plaisirs, de ses travaux et de sa civilisation, et qui n'a pas subi la dissolation lente des ruines ordinaires ; on croit involontairement que les propriétaires de ces maisons conservées dans leurs moindres détails vont sortir de leurs demeures avec leurs habits grecs ou romains; les chars, dont on aperçoit les ornières sur les dalles, se remettre à rouler ; les buveurs entrer dans ces thermopoles où la marque des tasses est encore empreinte sur lémarbre du comptoir. On marche comme dans un rêve au milieu du passé ; on lit en lettres rouges, à l'angle des rues, l'affiche du spectacle du jour ! seulement le jour est passé depuis plus de dix-sept siècles.
(2) -Tu ne manges pas, ma temme?

La pauvre ilote s'avança, coupa piteusement un morceau de pain et prit une poire. Eugénie offrit audacieusement à son père du raisin, en lui disant :
-Goûte donc à ma conserve, papa !-Mon cousin, vous en mangerez, n'est-ce pas? Je suis allée chercher ces jolies grappes-là pour vous.
-Oh ! si on ne les arrête, elles mettront Saumur au pillage pour vous, mon neveu. Quand vous aurez fini, nous irons ensemble dans le jardin, j'ai à vous dire des choses qui ne sont pas sucrées.
(3) Puis, outre cela, j'avais des idées de plusieurs choses sensibles et corporelles: car quoique je supposasse que je rêvais, et que tout ce que je voyais ou imaginais était faux, je ne pouvais nier toutefois que les idées n'en fussent véritablement en ma pensée : mais pour ce que j'avais déjà connu en moi très clairement que la nature intelligente est distincte de la corporelle, considérant que toute composition témoigne de la dépendance, et que la dépendance est manifestement un défaut, je jugeais de là, que ce ne pouvait être une perfection
en Dieu d'être composé de ces deux natures, et que, par conséquent, il ne l'était pas; mais que s'il y avait quelques corps dans le monde, ou bien quelques intelligences ou autres natures qui ne fussent point toutes parfaites, leur etre devait dépendre de sa puissance en telle sorte, qu'elles ne pouvaient subsister sans lui un seul moment.

## B.

[Ces questions sont plutôt à répondre en anglais].

1. Question obligatoire pour toutes les classesDonnez quelques détails sur :

L'Hôtel de Rambouillet-L'état, c'est moi-La littérature pendant la Révolution-Bossuet-Di derot .-Flaubert.
2. Décrivez le "Inventum Mirabile"; le commencement de la partie constructive de la "Méthode"; les origines de la doute de Descartes.
3. Comparez le dénoûment tragique d' "Horace" avec celui d' "Andromaque."
4. Comment Gautier est-il peintre plutôt qu'écrivain? Donnez-en des exemples.
5. Comment peut non appeler Rousseau un des précurseurs du mouvement romantique?
6. Donnez une courte étude sur le réalisme de Balzac et de Zola.
7. Nommez les principaux prosateurs du XVIII ${ }^{\text {me }}$ siécle, en mentionnant et on caractérisant leurs meilleurs ouvrages.
8. Que doit le drame français à Pierre Corneille ?
9. Le Romantisme, pourquoi l'appelle-t-on une révolte?

PRELIMINARY, INTERMEDIATE AND FINAL HONOURS.

## French Literature 11.

I. Traduisez en anglais.

J'ay volontiers imité cette desbauche qui se veoid en nostre jeunesse au port de leurs vestements : un manteau en escharpe, la cape sur une espaule, un bas mal tendu, qui represente une fierté desdaigneuse de ces parements estrangiers, et nonchalante de l'art; mais je la treuve encores mieulx employee en la forme du parler. Toute affectation, nommeement en la gayeté et liberté françoise est mesadvenante au courtisan; et en une monarchie tout gentilhomme doibt être dressé au port d'un courtisan ; parquoy nous faisons bien de gauchir un peu sur le naif et mesprisant. Je n'ayme point de tissure ou les liaisons et les coustures paroissent : tout ainsi qu'en un beau corps il ne fault pas qu'on y puisse compter les os et les veines.
(2) Mais la raison que je cherchoy tantost serait elle pas aussi de là, que, nostre etude en France n'ayant quasi aultre bout que le proufit, moins de ceux que nature a fait naistre à plus genereux offices que lucratifs, s'adonnants aux lettres, ou si courtement, il ne reste plus ordinairement, pour s'engager tout à fait à l'estude, que les gents de basse fortune qui y questent les moyens à vivre.

What arguments does Montaigne bring forward in support of this view? Of what is he seeking "la raison "?
3. What does Montaigne propose as the chief aim of education? Discuss this aim.
4. Give an account of Montaigne's style, quoting, as nearly as you can, some of his own remarks on style.
5. To what sect of philosophers (if any) do you think Montaigne belongs? Give reasons for your answer.
6. Describe the condition of France in Montaigne's time.
7. Compare Montaigne's views on friendship with Schiller's " Freundschaftsideal, " or State and criticise the views in the essay "De l'amitié.
8. Write a general criticism of Boileau's Art Poétique.
[Questions 7 and 8 are only to be answered by Final Honour candidates].
9. Alternative for all extra-mural students :-

Give Montaigne's opinions on the vanity of words and show how these views connect with his general theory of life.

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## INTERMEDIATE AND FINAL HONOURS.

## French Literature III.

## Translate into English :

(1) Elsbeth. C'est une invention de ton esprit, sans doute?

Fantasio. En aucune façon. C'est un serin de cour ; il y a beaucoup de petites filles très bien élevées qui n'ont pas d'autres procédés que celui-là. Elles ont un petit ressort sous le bras gauche, un joli petit ressort en diamant fin, comme la montre d'un petit-maitre. Le gouverneur ou la gouvernante fait jouer le ressort, et vous voyez aussitôt les lèvres s'ouvrir avec le sourire le plus gracieux; une charmante cascatelle de paroles mielleuses sort avec le plus doux murmure, et toutes les convenances sociales, pareilles à des nymphes légères se mettent aussitôt à dansoter sur la pointe du pied autour de la fontaine merveilleuse. Le prétendu ouvre des yeux ébahis ; l'assistance chuchote avec indulgence, et le père, rempli d'un secret contentement, regarde avec orgueil les boucles d'or de ses souliers.
(2) La calomnie, monsieur? vous ne savez guère ce que vous dédaignez; j'ai vu les plus honnêtes gens prêts d'en être accablés. Croyez qu'il n'y a pas de plate méchancete, pas d'horreurs, pas de conte absurde, qu'on ne fasse adopter aux oisifs d'une grande ville en s'y prenant bien ; et nous avons ici des gens d'une adresse I... D'abord, un bruit léger, rasant le sol comme l'hirondelle avant l'orage, pianissimo, murmure et file et sème en courant le trait empoisonné. Telle bouche le recueille, et piano, piano vous le glisse en l'oreille adroitement. Le mal est fait, il germe, il rampe, il chemine, et rinforzando de bouche en bouche il vale diable ; puis, tout à coup, ne sais comment, vous voyez la calomnie se dresser, siffler, s'enfler, grandir à vue d'œil.
(3) Tout s'embrase. Voyez! l'eau de cendre est semée, Le vent aux mâts en flamme arrache la fumée, Le feu sur les tillacs s'abat en ponts mouvants. Déjà brûlent les nefs ; déjà, sourde et profonde, La flamme en leurs flancs noirs ouvre un passage à l'onde; Déjà, sur les ailes des vents,

L'incendie, attaquant la frégate amirale,
Déroule autour des mâts son ardente spirale,
Prend les marins hurlants dans ses brûlants réseaux,
Clouronne de ses jets la poupe inabordable,
Triomphe, et jette au loin un reflet formidable, Qui tremble, élargissant ses cercles sur les eaux.
[Only four of the following questions to be attempted].
4. Sketch briefly the relation of the Church to the Revolution,
or,

Show why the attack on the Feudal System broke out first and most fiercely in France.
5. Give instances of the centralisation of administration under l'ancien régime.
6. Specify some of the Feudal rights and show their effect on the people.
7. How does the political condition of France in the 17 th century reflect itself in the Literature?
8. Sketch briefly the character of Tartarin as we find him in Tartarin sur les Alpes.
9. Discuss the structure of Racine's Iphigénie.
10. What is the attack made by Molière in Le Misanthrope?
in Les Précieuses Ridicules?
or,

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## French.

## Unseen Translation and Composition.

[Preliminary Honours to try Questions 1, 2 and 4 ; other Honours, all the Questions.?

Translate into English :
(1) Cromwell mourut dans la plénitude de son pouvoir et de sa grandeur. Il avait réussi au delà de toute attente, bien plus que n'a réussi aucun autre des hommes qui, par leur génie, se sont élevés, comme lui, au rang suprême, car il avait tenté et accompli, avec un égal succès, les desseins les plus contraires. Pendant dix-huit ans, toujours en scène et toujours vainqueur, il avait tour à tour jeté le désordre et rétabli l'ordre, fait et châtié la révolution, renversé et relevé le gouvernement dans son pays. A chaque moment, dans chaque situation, il démêlait avec une sagacité admirable les passions et les intérêts dominants, pour en faire les instruments de sa propre domination, peu soucieux de se démentir pourvu qu'il triomphât d'accord avec l'instinct public, et donnant pour réponse aux incohérences de sa conduite l'unité ascendante de son pouvoir. Exemple unique peut-être que le même homme ait gouverné les événements les plus opposés et suffi aux plus diverses destinées. Et dans le cours de cette carrière si forte et si changeante, incessamment en butte à tonte sorte d'ennemis et de complots, Cromwell eut de plus cette faveur du sort que jamais sa vie ne fut effectivement attaquée; le souverain contre lequel était écritle pamphlet : Tuer n'est pas assassiner, ne se vit jamais en face d'un assassin. Le monde n'a point connu d'exemple de succès à la fois si constants et si contraires. ni d'une fortune si invariablement heureuse au milieu de tant de luttes et de périls.

Guizot.
(2) Mme Oreille était économe. Elle savait la valeur d'un sou et possédait un arsenal de principes sévères sur la multiplication de l'argent• Sa bonne, assurément, avait grand mal à faire danser l'anse du panier ; et M. Oreille n'obtenait sa monnaie de poche qu'avec une extrême difficulté. Ils étaient à leur aise pourtant, et sans enfants; mais Mme Oreille éprouvait une vraie douleur à voir les piéces blanches sortir de chez elle. C'était comme une déchirure pour son coeur ; et,
chaque fois qu'il lui avait fallu faire une dépense de quelque importance, bien qu'indispensable, elle dormait fort mal la nuit suivante.

Oreille répétait sans cesse à sa femme :
-Tu devrais avoir la main plus large, puisque nous ne mangeons jamais nos revenus.

Elle répondait:
-On ne sait jamais ce qui peut arriver. Il vaut mieux avoir plus que moins.

C'était une petite femme de quarante ans, vive, ridée, propre, et souvent irritée.

Son mari à tout moment se plaignait des privations qu'elle lui faisait endurer. Il en était certaines qui lui devenaient particulièrement pénibles, parce qu'elles atteignaient sa vanité. Guy de Maupassant.
(3) Au bout de quinze jours nous étions sans un sou. -J'avais passé ce temps à marcher comme un fou, Seul, allant devant moi, tout droit, parmi la foule, Car le bruit des cités vous endort et vous soûle, Et mieux que l'alcool fait oublier la faim. Mais, comme je rentrais une fois, vers la fin D'une après-midi froide et grise de novembre, Je vis ma femme assise en un coin de la chambre, Avec les deux petits serrés contre son sein ;
Et je pensai : C'est moi qui suis leur assassin! Quand la vieille me dit, douce et presque confuse :
" Mon pauvre homme, le Monte-de-Piété refuse
Le dernier matelas, comme étant trop mauvais.
Où vas-tu maintenant trouver du pain?"
" J'y vais, "
Répondis-je; et, prenant à deux mains mon courage,
Je résolus d'aller me remettre à l'ouvrage ;
Et, quoique me doutant qu'on m'y repousserait,
Je me rendis d'abord dans le vieux carbaret
Où se tenaient toujours les meneurs de la grève. François Coppée.
4. Write a composition in French on one of the following subjects :
(a) The difficulty of writing letters.
(b) "The quality of mercy is not strained."
(c) The truth of the picture of French domestic life as found in French fiction.
(d) The liberty of the Press.

## FINAL HONOURS.

## French.

## Philology.

1. Reproduisez en prose moderne :
(a) Rollanz ferit al pedron de Sartaigne:

Croist li aciers, ne briset ne n'esgraignet.
Quant il coo vit que n'en pout mie fraindre,
A sei medisme la comencet a plaindre :
E ! Durendal, com iés et clere et blanche !
Contre soleil si reluis et reflambes !
Charles estait es vals de Moriane,
Quant Deus del ciel li mandat par son angele
Qu'il te donast ad un conte chataigne ;
Donc la me ccinst li gentilz reis, li maignes.
(b) La maisnie al Sathan est el mostier venue,

En sa destre main tint chascuns s'espée nue
En l'altre les cuignies e li quarz besagüe.
Un piler ot iluec la volte ad sustenue,
Qui del saint arcevesque lur toli la veïe.
(c) Donnez l'étymologie des mots soulignés dans ces deux extraits.
2. Explain etymologically the so-called, or real, irregularities in the following :
(a) The feminine of blanc, frais, actif, beau, absous.
(b) The plural of cheval, oeil.
(o) The present indicative of aller, tenir, devoir.
(d) The preterite of faire, prendre.
3. Account for the letter " $b$ " in words like chambre, and the letter " $d$ " in gendre, tendre, plaindre, \&c.
4. Explain fully the developement in French of the following words: dominum, debere, debebam, acceptare, renditam estimare.
5. Point out the main characteristics of old French versification.
6. What is the historical foundation of the "Chanson de Roland."


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## PRELIMINARY HONOURS. . Anglo-Saxon.

## I.

1. Tha $æ f$ fter Oswoldes slege feng Oswig his brothor to Northhymbra rice, and rad mid werode to thær his brothor heafod stod on stacan gefæstnod, and genam thæt heafod and his swithran hand, and mid arwurthnysse ferode to Lindisfarnea cyrcan. Tha wearth gefylled, swa we her foresædon, thæt his swithre hand wunath hal mid tham flæsce butan ælcere brosnunge, swa se bisceop gecwæth. Se earm wearth geled arwurthlice on scrine, of seolfre asmithod, on Sancte Petres mynstre binnan Bebben-byrig be thære sæ strande, and lith thær swa ansund swa he of-aslagen wæs. His brothor dohtor eft siththan on Myrcan wearth cwen, and geaxode his ban, and gebrohte hi to Lindesige to Bardanige mynstre, the heo micclum lufode. Ac tha mynstermenn noldon for menniscum gedwylde thone sanct underfon, ac man sloh an geteld ofer tha halgan ban binnan thære licreste. Hwæt tha God geswutelode thæt he halig sanct wæs, swa thæt heofonlic leoht ofer thæt geteld astreht stod up to heofonum swilce healic sunnbeam ofer ealle tha niht ; and tha leoda beheoldon geond ealle the scire swithe wundrigende.
(a) Translate the above passage.
(b) Give a brief account of Oswald's life with approximate dates. Explain the reference contained in the words "swa se bisceop gecwaeth." How does the original story as given by Bede explain the words "for menniscum gedwylde."
2. Parse the following words giving the principal parts of the verbs, including the 3 rd pers. pres. ind., and the nominative plural of the nouns : brothor (1.2), heafod (1. 2), genam (1. 3), geled (1. 7), lith (1. 9), astreht (1. 17), niht (1. 18), wundrigende (1, 19).
3. Decline begen and burg. Conjugate in full don and witan.
4. Turn into Anglo-Saxon:
(1) As soon as the fierce sea-rover heard that then he drove his youngest son to the battle and bade him fight against the South Saxons till he fell.
(2) Then King Alfred related to him the story of the battle, and ordered him to bring two thousand men to the ships.
(3) Then they brought him to the town-reeve and to the most learned men and made known to them the wonderfal power of song which had been given him from God himself.
II.
5. Thulke festes he wolde holde so nobliche,

With so gret prute \& wast and so richeliche,
That wonder it was wenene it com ac, to susteini such nobleye,
He destruede that pouere folc and nom of hom is preye.
Translate the above. Give the Anglo-Saxon forms of the following words, and explain the changes tney have undergone (I) in Robert of Gloucester, (2) in our modern English: Thulke, richeliche, wenene, nom, hom. Explain the modern changes of nobleye and pouere.
6. Give the Anglo-Saxon forms of the following words and comment (giving the technical names of the processes) on any change of meaning or form : fiend, borrow. rather, thatch, forlorn, hove, hewn, uttermost, next. Discuss and explain the forms: methinks, whilom, I wois, worser.

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## HONOURS.

## English.

## FIRST PAPER.

1. The world is too much with us; late and soon, Getting and spending, we lay waste our powers ; Little we see in nature that is ours ;
We have given our hearts away, a sordid boon!
This sea that bares her bosom to the moon;
The winds that will be howling at all hours,
And are upgathered now like sleeping flowers;
For this, for everything, we are out of tune ;
It moves us not.-Great God! I'd rather be
A Pagan suckled in a creed outworn;
So might I standing on this pleasaut lea,
Have glimpses that would make me loss forlorn ;
Have sight of Proteus rising from the sea;
Or hear old Triton blow his weathered horn.
(a) Explain clearly the meaning of the line, "Little we see in nature that is ours," and discuss the point of contact between Wordworth's poetry of nature and Greek mythology.
(b) Make notes on the structure of this sonnet. How would you describe the relation of the sestet to the octave? Is the thought suitable for the sonnetform and clearly developed? Characterize the diction and the rhythm generally. How do they differ from Wordsworth's usual style?
2. (a) The kings and nations of Germany and Scythia, from the Volga perhaps to the Danube, obeyed the warlike summons of Attila. From the royal village, in the plains of Hungary, his standard moved towards the West; and after a march of seven or eight hundred miles, he reached the conflux of the Rhine and the Neckar, where he was joined by the Franks, who adhered to his ally, the elder of the sons of Clodion. A
troop of light Barbarians, who roamed in quest of plunder, might choose the winter for the inconvenience of passing the river on the ice; but the innumerable cavalry of the Huns required such plenty of forage and provision, as could be procured only in a milder season ; the Hercynian forest supplied material for a bridge of boats ; and the hostile myriads were poured, with resistless violence, into the Belgic provinces. The consternation of Gaul was universal ; and the various fortunes of its cities have been adorned by tradition with martyrdoms and miracles, Troyes was saved by the merits of St. Lupus; St. Servatius was removed from the world, that he might not behold the ruin of Tongres; and the prayers of St. Genevieve diverted the march of Attila from the nelghborhood of Paris. But as the greatest part of the Gallic cities were alike destitute of saints and soldiers, they were besieged and stormed by the Huns; who practised, in the example of Metz, their customary maxims of war. They involved, in a promiscuous massacre, the priests who served at the altar, and the infants, who, in the hour of danger, had been providently baptized by the bishop; the flourishing city was delivered to the flames, and a solitary chapel of St. Stephen marked the place where it formerly stood.-Gibbon.
(b) The great middle classes of this country are conscious of no weakness, no inferiority ; they do not want any one to provide anything for lhem. Such as they are, they believe that the freedom and prosperity of England are their work, and that the future belongs to them. No one esteems them more than I do ; but those who esteem them most, and who most believe in their capabilities, can render them no better service than by pointing out in what they underrate their deficiencies, and how their deficiencies, if unremedied, may impair their future. They want culture and dignity; they want ideas. Aristocracy has culture and dignity ; democracy has readiness for new ideas, and ardour for what ideas it possesses. Of these, our middle class has the last only : ardour for the ideas it already possesses. It believes ardently in liberty, it believes ardently in industry; and, by its zealous belief in these two ideas, it has accomplished great things.

The social action of Protestant Dissent, that genuine product of the English middle class, has not been civilising; its positive intellectual action has been insignificant ; its negative intellectual action,-in so far as by strenuously maintaining for itself, against persecution, liberty of conscience and the right of free opinion, it at the same time maintained and established this right as a universal principle, -has been in-
valuable. But the actual results of this uegative intellectual service rendered by Protestant Dissent,-by the middle class, -to the whole community, great as they undoubtedly are, must not be taken for something which they are not. It is a very great thing to be able to think as you like; but, after all, an important question remains : what you think. It is a fine thing to secure a free stage and no favour ; but, after all, the part which you play on that stage will have to be criticised. Now, all the liberty and industry in the world will not ensure these two things : a high reason and a fine culture. They may favour them, but they will not of themselves produce them ; they may exist without them. But it is by the appearance of these two things, in some shape or other, in the life of a nation, that it becomes something more than an independent, an energetic, a successful nation,-that it becomes a great nation.-Arnold.

Show how far these two passages illustrate characteristic qualities in the thought and style of the writers.
3. (a) So came the autumn, and passed, and the winter,yet Gabriel came not;
Blossomed the opening spring, and the notes of the robin and blue-bird
Sounded sweet upon wold and in wood, yet Gabriel came not.
But on the breath of the summer winds a rumour was wafted
Sweeter than song of bird, or hue or odour of blossom, Far to the north and east, it said, in the Michigan forests,
Gabriel had his lodge by the banks of the Saginaw river.
(b) Not unwarned the father, nor had been unperceiving: Fearful much, but in all from the first reassured by the Tutor.
And he remembered how he had fancied the lad from the first; and
Then, too, the old man's eye was much more for inner than outer.
Criticize these types of hexameter. Scan passage (a).

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HONOURS.

## English.

SECOND PAPER.

1. Explain and comment on the writer's meaning and point of view in the following extracts, explain particularly the phrases italicized :
(a) - these latter are your Conquerors, Romans, Normans, Russians, Indo-English ; Fonnders of what we call Aristocracies. Which indeed have they not the most 'divine right' to found ;-being themselves very truly "A 1 ıбто८ Bravest, Best; and conquering generally a confused rabble of Worst, or at lowest, clearly enough, of Worse? I think their divive right, tried, with affirmatory verdict, in the greatest Law-Court known to me, was good! A class of men who are dreadfully exclaimed against by Dryasdust ; of whom nevertheless beneficent nature has oftentimes had need; and may, alas, again have need.
(b) To us all serious speech of men, as that of Seventeenth Century Puritans, Twelfth Century Catholics, German Poets of this century, has become jargon, more or less insane. Cromwell was mad and a quack; Anselm, Becket, Gœthe, ditto ditto.
(c) Plugson of Undershot, like Taillfer of Normandy, wants victory ; how much happier will even Plugson be to have a Chivalrous victory than a Choctaw one!
(d) Thus had the Everlasting No pealed authoritatively through all the recesses of my Being.
2. (a) Illustrate from the following poems what was new in Wordsworth's representation of humble life : The Old Cumberland Beggar, The Highland Girl, The Blind Highland Boy. Compare his power of representing this kind of life (I) with that of Burns (2) with that of Crabbe.
(b) Characterize the qualities of thought and style in Laodamia..
(c) Compare Wordsworth and Keats in their treatment of nature, illustrating your answer freely by references and quotations.
3. State from what poems or works the following extracts are taken; explain their meaning and application :
(a) Here's Giotto with his Saint a-praising God,

That sets us praising,-why not stop with him?
(b) All freakishness of mind is checked;

He tamed who foolishly aspires ;
While to the measure of his height
Each fashions his desires.
(c) Aha, Elucescebat quoth our friend ?

No Tully, said I, Ulpian at the best!
(d) Me this unchartered freedom tires

I feel the weight of chance-desires.
(e) in that glorious time
When learning like a stranger come from far,
Sounding through Christian lands her trumpet, roused Peasant and king.
( $f$ ) Thou fountain, at which drink the good and wise, Thou ever bubbling spring of endless lies.
(g) And I was taught to feel, perhaps too much, The self-sufficing power of solitude.
(h)

Far other show
My youth here witnessed, in a prouder time :
The senselessness of joy was then sublime.
(i) Its use in Time is to environ us, Our breath, our drop of dew, with shield enough Against that sight till we can bear its stress.

But time and earth case-harden us to live.
4. Give a careful outline of the argument in Bishop Blougram's Apology. What is the weakness in the position of Gigadibs? Compare the view of life ascribed to the Bishop with the doctrine taught in Carlyle's chapter 'Reward' in Past and Present.

Queen's University Examinations : April, 1907. HONOURS.

## English.

- THIRD PAPER.

1. Give a careful account of Arnold's estimate of Chaucer's work. Discuss particularly the value of the criterion he uses in fixing the limitations of Chaucer. What qualities does he recognize as the principal merits of Chaucer (i) in the interpretation of life, (2) in style? Illustrate your answers as much as you can by references to or quotations from the following poems: The House of Fame, The Prologue, any of The Canterbury Tales, The Legend of Dido.
2. Characterize the qualities of thought, diction and rhythm in the following poems:

Hymn Before Sunrise in the Vale of Chamouni.
A Blot on the Scutcheon.
3. Make a formal analysis of the following works under the heads (i) Qualities of Thought, (2) Qualities of style :

> Carlyle's Life of John Sterling.
> Emerson's Literary Ethics.
4. (a) Give a sketch of the development of the octosyllabic couplet. Compare its management by Chaucer and Byron.
(b) Give a general survey of Chaucer's artistic development as a poet and the various influences which are traceable in his poetry.

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HONOURS.

## History.

## FIRST PAPER.

I. In the later Anglo-Saxon period England was divided into the Saxa-laga, the Dane-laga, and the Mercian-laga. What was the respective extent of these divisions? What was their relation to the early settlement of the Angles and Saxons in England?
2. Classify the jurisdiction of the Manorial Courts, and state their relation to the Hundred and County Courts.
3. Define compurgation. What is meant by the twelfhynd, the sixhynd man, and the twyhynd man? On what is this distinction based?
4. What measures did the Norman kings, except Stephen, take to guard against the development of the Feudal System in England?

5- ${ }^{\text {T }}$ de Rodelend clamabat ad teinland, sicut diratiocinavit comitatus, nunquam pertinuit ad manerium extra civitatem sed ad burgum pertinet ; et semper fuit in consuetudine regis et comitis sicut aliorum burgensium."-(Domesday, i. 262, b.)

How does this illustrate what Maitland calls the Heterogeniety of the Broughs ?
6. Stubbs says "the effect of the Norman conquest on the character and constitution of the English was threefold." Discuss this.
7. State briefly the terms of the Assize of Clarendon. What is its value as a legal document? How was it to be enforced?

Queen's University Examinations: April, 1907.

> HONOURS.

## History.

SECOND PAPER.
I. Stubbs says "The great Charter closes one epoch and begins another." What are the distinguishing features of the two epochs?
2. State the purpose of each of the following statutes : Quia Emptores, De Religiosis, of Provisors, of Præmunire, the two statutes of Westminster, and also the Writ Quo Warrunto.
3. "The period (the reign of Edward I. 12721307) lies midway between the prolific premature life of the early thirteenth century and the splendid formal hollowness of the fourteenth." Discuss this statement.
4. What was the character of the Parliaments between that of Simon de Montfort ( 1265 ) and the Model Parliament (1295) ?
5. "The right of each of the three estates to share in legislation was established by a different process and on a different theory." Discuss this.
6. State the question regarding the admission of Proctors to Parliament.
7. Point out the relation of the Cabinet to the Sovereign and to either House of Parliament.
8. Discuss the following assertion of Rousseau : "The fundamental problem of society is to find a form of association which may defend and protect the per-
son and property of every associate, and by means of which each, coalescing with all may nevertheless obey only himself, and remain as free as before."
9. Guizot asks, "Where does the right of sovereignty reside, and what is the principle on which it rests ?" Give an answer.
ro. Under what social conditions does Mills say that representative assemblies are inapplicable ?
ir. Discuss the question, "Should a member of the legislative be bound by the instructions of his constituents?"

Queen's University Examinations : April, 1907.
HONOURS.
History.

THIRD PAPER.
I. Discuss the conditions which produced the "New Monarchy."
2. Discuss "The Long Parliament marks the legal establishment of our constitution."
3. Discuss "The Revolutionary period does not staictly belong to the history of the progress of the English constitution."
4. Discuss "To the King's (Charles II.) coming in without conditions may be well imputed all the errors of his reign."
5. Discuss the constitutional issues raised on the impeachment of Danby.
6. Criticize Hallam's attitude towards the Long Parliament.
7. Discuss the principles involved in any four of the following cases : Bushell, Bate, Skinner v. East India Co., Godden v. Hales. Darnel (5 Knights case), Calvin's case.
8. What is your estimate of the character and purpose of either Wentworth or Vane?
9. Describe the executive organization of the Tudors.

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## History.

## FOURTH PAPER.

1. Discuss the constitutional importance of Temple's scheme of a remodelled Privy Council.
2. Discuss "The permanent basis of the division of English parties has been religious."
3. Discuss the constitutional principles of the Act of Settlement.
4. Describe the present constitutional relations of the House of Lords and the House of Commons.
5. Discuss "Walpole is the first Prime Minister."
6. Discuss "The administration of Pitt marks the change in the character of the English Peerage."
7. What is meant by the statement that the English constitution is a "law of political conditions."
8. Discuss " The American constitution unlike the English, is not a historical but a manufactured instrument of government."
9. Compare or contrast the English and American constitutions in respect to the principle of the distribution of powers.
10. The American constitution is essentially juristic in character, while the English on the contrary has the higher moral and educational value. Discuss this proposition and explain its significance.
II. Discuss "The Canadian constitution is in form and in character a copy of that of the United States."

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HONOURS

## Philosophy.

First Paper.
I. (a) Outline the theory of (a) Parmenides and (b) Heraclitus.
(b) What estimate did Plato finally form of the value of these theories?
2. Explain and discuss the method which Plato puts forward in the Sophist as the true method of philosophy.
3. Examine Plato's theory of (a) oúбía (b) 入óvos, as developed in the Sophist.
4. Give Plato's theory of the creation of the world, and consider it critically.
5. What was Plato's attitude towards popular Greek religion? In what way does he seek to establish the existence of God? Is his proof satisfactory?

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## Philosophy.

## SECOND PAPER.

i. How does Kant seek to show that the categorical ought is an a priori synthetic proposition? Compare his derıvation of it with the deduction of the categories.
2. "While freedom is the ratio essendi of the moral law, the moral law is the ratio cognoscendi of freedom". How is Kant led to make this distinction? Is it valid?
3. Why does Kant distinguish between the determinant and the reflective judgment?
4. State and give Kant's solution of the Antinomy of Judgment.
5. "The necessity asserted in a judgment of taste rests upon the idea of a common sense". Explain.
6. State and examine the three reasons advanced by Kant for denying a "knowledge" of God.

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## HONOURS.

## Philosophy.

## THIRD PAPER.

i. "The Idea has not only the general meaning of true being, as the unity of Conception and Reality, but the more specific sense in which it is the unity of the Subjective Conception and Objectivity". Explain.
2. "It is said that Contradiction is inconceivable, but in the pain of living beings it presents itself as an actual existence". Show by reference to the process of life what Hegel here means.
3. What does Hegel commend, and what does he object to, in Kant's criticism of Rational Psychology?
4. Explain the transition from definition to division.
5. "The absolute Method is not a process of external reflection, but obtains the determinate from its own object, of which it is the immanent principle and soul". Explain this "absolute Method", illustrating it by reference to the distinctions of Sein, Nichts and Werden.

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> HONOURS.

## Philosophy.

## FOURTH PAPER.

r. How does Hegel define the "use" of the object? Consider whether his idea leaves room for "right to waste". Form your own view of this question.
2. "The good is the idea as unity of the conception of the will with the particular will. In it abstract right, well-being, the subjectivity of consciousness, and the contingency of external reality, are in their independent and separate existences superseded, although in their real essence they are contained in it and preserved. This unity is realized freedom, the absolute final cause of the world".

Explain (a) the meaning of Begriff, die Idee, Dasein, aufheben, Endzweck, as used in this paragraph.
(b) How does Hegel view the "good" here? Bring this view into comparison with his general ethical theory.
3. What is Hegel's explanation of "evil"? Consider this problem in connection with the theory that the universe is absolutely perfect.
4. "States, peoples and individuals are established upon their own particular definite principle, which has systematized reality in their constitutions and in the entire compass of their surroundings. Of this systematized reality they are aware, and in its interests are absorbed. Yet are they the unconscious tools and organs of the world-spirit, through whose inner activity the lower forms pass away. Thus the spirit by its own motion and for its own end makes ready and works out the transition into its next higher stage".

Explain the process referred to here, making clear what Hegel means by "world-spirit". Add to your answer your own viêw of the "individual".

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HONOURS

## Philosophy.

Fifth Paper.
$\qquad$

1. Examine Green's view that there was an inevitable transition from the intuitive form of the religious consciousness to dogma.
2. What objections may be raised to the doctrine that prior to perception we have a "flux of sensations," and that "a knowledge of things is a knowledge of their properties?"
3. In what sense must the term "experience" be understood if it is to account for the knowledge of nature?
4. "That there is a consciousness which makes the world one we know, but as to what it is in itself or in its completeness we can only make negative statements." Explain and examine this view.
5. "In the growth of our experience an animal organism gradually becomes the vehicle of an eternally complete consciousness." How do you interpret this saying? Is the doctrine indicated satisfactory?

Queen's University Examinations: April, 1907.

HONOURS.

## Philosophy.

## SIXTH PAPER.

1. "Ultimate reality is such that it does not contradict itself." (a) What use does Bradley make of this so-called "criterion?" (b) Discuss the problem of self-contradiction with reference to Bradley and Hegel, giving your own view.
2. "Thought, in its actual processes and results, cannot transcend the dualism of the "that" and "what"." (a) Explain Bradley's conception of "thought." (b) How does he conceive of its relation to "sentience?" (c) Examine his doctrine that "the reality that is presented is taken by thought in a form not adequate to its nature, and beyond which its nature must appear as an Other. "
3. "A general doctrine is not destroyed by what we fail to understand." (a) How is this principle applied in reconciliation of error with the Absolute? (b) Give your own explanation of error, showing how it bears upon the present problem.
4. (a) State, and (b) examine, Bradley's theory of moral evil.
5. "To assert that, in the history of the Universe at large, matter came before mind, is to place development and succession within the Absolute." (a) Explain, by reference to this statement, Bradley's view of the relation of Nature to the Absolute. (b) Examine his doctrine.

Queen's University Exammations : April, 1907.

## HONOURS.

## Philosophy.

Seventh Paper.

1. "Epic poetry and Tragedy, Comedy also and dithyrambic poetry, and the music of the flute and of the lyre in most of their forms, are all in their general conception modes of imitation."
(a) Examine this statement as a theory of Art.
(b) Contrast the views of artistic imitation held by Plato and Aristotle.
2. "To learn gives the liveliest pleasure."
(a) Give a critical estimate of the value of this statement. Is it a valid standard for judging a work of Art? Why?
3. (a) State Aristotle's view of the $\kappa \alpha ́ \theta a \rho \sigma \iota s$ effected by Tragedy. (b) How do the emotions of pity and fear enter into this process, and what sort of scenes and characters are best adapted to arouse these feelings?
4. Distinguish between :
(a) beauty and utility.
(b) beauty and goodness.
(c) beauty and truth.
5. Examine any work of art at your choice, with the view to indicate what constitutes it a work of art.
6. Analyze with some care that activity of consciousness, to which is commonly given the name "imagination," touching, when you can, upon inadequate views.

Queen's University Examinations : April, 1907.

## PRELIMINARY HONOURS.

## Political Science.

## FIRST PAPER.

1. Discuss the economic aspects of the gifts of nature, with special reference to the distinction between wealth and capital.
2. How far and under what conditions does the factor of competition survive in economic fields controlled by large corporations?
3. Under what conditions may profits and wages both increase without raising prices?
4. What effect upon private ownership has the development of corporate property had?
5. What were the effects of the Canadian crisis of 1837 upon industry and population in Upper and Lower Canada respectively?
6. Describe briefly the system of disposing of the public lands which prevailed in British North America previous to Lord Durham's Mission, and consider its effects upon the development of the * colonies.

Queen's University Examinations: April, 1907.

## PRELIMINARY HONOURS.

## Political Science.

SECOND PAPER.
I. Trace the growth of the Prætorian Edict in Roman jurisprudence, and indicate its influence upon the later Roman system of law and government.
2. What are the advantages and dangers of the historic method of studying legal and political institutions?
3. Account for the influence of the conception of the Law of Nature on the law and politics of modern Europe.
4. Trace the historic development of contract in Roman law.
5. Discuss the grounds on which Lord Durham advocated a union of the two Canadian Provinces as a condition of granting responsible government.
6. How far was the criticism of the Executive Government on the popular element in the Assembly of Upper Canada justified, and to what extent did the granting of responsible government lead to the removal of these evils?

Queen's University Examinations: April, 1907.

FINAL HONOURS.

## Political Science.

FIRST PAPER.

1. "Every improvement in the circumstances of society tends either directly or indirectly to raise the real rent of land." Consider the validity of the reasoning by which Smith reaches this conclusion.
2. Summarize Smith's argument to show that the mercantile system is unreasonable on its own principles. How far will this apply to the protective system of the present time?
3. "All that anyone employs in supporting and carrying on any other labour than his own, must have been originally brought together by saving; somebody must have produced it and forborne to consume it." Examine this proposition of Mill's in the light of present conditions.
4. Discuss Mill's views as to the tendency of profits to a minimum, and the causes which prevent this tendency from being completely realized.
5. Trace the growth and influence of the various factors which converted the craft-gild system into the national system of economy.
6. How far had the characteristic features of Adam Smith's economic views been anticipated by previous writers?

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## FINAL HONOURS.

## Political Science.

-SECOND PAPER.

1. Discuss the economic aspects of the gifts of nature, with special reference to the distinction between wealth and capital.
2. How far and under what conditions does the factor of competition survive in economic fields controlled by large corporations?

3 , Consider the validity of the objections to becoming legally responsible corporations, which are commonly urged on behalf of organized labour.
4. How may the influence of public opinion be beneficially enlisted in the settlement of labour disputes?
5. Discuss the proper basis of valuation of public service corporations.
6. How far are the essential principles of socialism realized in the common forms of municipal ownership and operation? How does socialism propose to maintain individual enterprise?

Queen's University Exammations: April, 1907.

FINAL HONOURS.

## Political Science.

## THIRD PAPER.

I. Trace the growth of the Prætorian Edict in Roman jurisprudence, and indicate its influence upon the later Roman system of law and government.
2. Discuss the function of the Roman Quæstiones in the development of true criminal law.
3. Illustrate by examples typical forms of public opinion. Under what conditions does public opinion become effective in making or amending law?
4. Discuss Dicey's conception of Collectivism as the dominant phase of modern public opinion.
5. What are the characteristics of states as international persons? How were international rights developed, and how are they defined?
6. What are the various legal factors which characterise modern ownership?

Queen's University Examinations : April, 1907.

## Political Science.

FINAL HONOURS.

## FOURTH PAPER.

r. Trace the mutual influences of Teutonic institutions and Roman Law in the formation of the typical Teutonic System of the Middle Ages.
2. Analyze Roman democracy during the Consular period, bringing out its strong and weak features as a working system.
3. Trace the influence of absolute monarchy in the transition from feudalism to modern democracy.
4. Give the essential features of local administration in France, showing the powers exercised by the local and national authorities respectively.
5. Compare the effects upon government, of the racial problem in Canada before 1850, and in AustriaHungary down to the present.
6. Contrast the purposes of the dominant elements in the Legislatures of Upper and Lower Canada, in their opposition to the Executive Governments.

Queen's University Examinations : April, 1907.

# Political Science. 

FINAL HONOURS.
$\qquad$
FIFTH PAPER.

1. Compare the Canadian and American systems of note issue by both governments and banks, with special reference to $(a)$ the security of the noteholders, (b) the elasticity of the currency.
2. What are the points of similarity and difference between international and domestic exchange? Under what circumstances may the gold points be passed in the upward and downward movement of exchange?
3. On what principles are the joint earnings between branch and trunk lines of railway commonly distributed? Where they are both under one management but with separate capitals, what difficulties may arise?
4. What essential considerations must be regarded in the re-organization of large corporations, such as railroads, when they are unable to meet their liabilities?
5. How far is earning power a fundamental consideration in the various plans for determining the taxable value of corporations?
6. Point out definitely what is involved in the shifting of taxation. Under what circumstances is it effective in equalizing the tax burden?

Queen's University Examinations : April, 1907.

HONOURS.
AIgebra I.

1. $f(x)$ is divisible by $x-p$ but not by $x-r$. Show that the remainder when $f(x)$ is divided by

$$
(x-p)(x-r) \text { is } \frac{x-p}{r-p} f(r)
$$

2. Explain the principle of mathematical induction, and illustrate it by proving the binomial theorem for negative integral indices.
3. $n$ lines lie in a plane and no two are parallel. Find the number of intersections when (a) no three of the lines are concurrent, $(b) r$ of the lines are concurrent, $(c) r$ are concurrent at one point and $s$ at another.
4. Prove from the binomial expansion that

$$
\begin{gathered}
\mathrm{I}+{ }^{n} H_{1}+{ }^{n} H_{2}+\cdots \cdots+{ }^{n} H_{r}={ }^{n+1} H_{r}, \text { when }{ }^{n} H_{k} \\
=\frac{n(n+\mathrm{I}) \cdots \cdots(n+k-\mathrm{I})}{\mathrm{I} \cdot 2 \cdot \cdots \cdots k} .
\end{gathered}
$$

5. In simple continued fractions, prove (a) the rule for finding successive convergents, $(b)$ that every convergent is in its lowest terms.
6. Sum the series :-
(a) $\frac{\mathrm{I} \cdot 2}{\mathrm{I}!}+\frac{2 \cdot 3}{2!}+\frac{3 \cdot 4}{3!}+\frac{4 \cdot 5}{4!}+\cdots \cdots$ to $\infty$.
(b) $\frac{1}{1 \cdot 3}+\frac{1}{2 \cdot 4}+\frac{1}{3 \cdot 5}+\frac{1}{4 \cdot 6}+\cdots$ to $n$ terms and to $\infty$.
(c) $1-1-3+1+17+51+\cdots \cdot$ to $n$ terms.
7. Find the generating function and the $n^{\text {th }}$ term of the 3 rd order series $1-x+2 x^{2}-2 x^{3} \ldots \ldots$
8. What is meant by interpolation?

Given that $\log 23=1 \cdot 36173, \log 24=1 \cdot 38021, \log$ $25=1 \cdot 39794, \log 26=1.41497$, find $\log 23.4$; and calculate the error in finding it by proportional parts.
9. Examine the convergency of the binomial series, the exponential series, and the logarithmic series.

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HONOURS.

## Trigonometry I.

I. (a) Define degree and radian, and establish the relations between them.
(b) Two towns, A and B, are on the same meridian. A is $36^{\circ} 10^{\prime} 37^{\prime \prime}$ north latitude, and B is $78^{\circ} 24^{\prime} 5^{2^{\prime \prime}} \cdot 04$ south latitude. Find distance between A and B, assuming the earth's radius 3,960 miles ( $\pi=3 \cdot 14$ I $^{159}$ ).
2. Draw the graph of $\sin \left\{\frac{\pi}{2} \cos \theta\right\}$ from $\theta=-2 \pi$ to $\theta=2 \pi$.
3. "The addition formulae for $\sin (\alpha \pm \beta)$ and $\cos (\alpha \pm \beta)$ are included in Ptolemy's theorem,-If a quadrangle be inscribed in a circle, the rectangle on the diagonals equals the sum of the rectangles on the sides taken in opposite pairs". Prove this for one of the four formulae and deduce the other three from it.
4. (a) The area of any quadrangle whose sides are $a, b, c, d$, is $\sqrt{ }\left\{(s-a)(s-b)(s-c)(s-d)-a b c d \cos ^{2} \theta\right\}$ where $s$ is the semi-perimeter and $\theta$ is half the sum of either pair of opposite angles.
(b) From (a) show under what condition the area of a quadrangle is a maximum if its sides are given.
5. (a) Show how to obtain the first three terms in the expansion of $\sin \theta$ in a series of ascending powers of $\theta$, and write down the next four terms.
(b) If $\sin \theta / \theta=19493 / 19494$, show that $\theta=1^{\circ}$ approximately.
6. In $\triangle \mathrm{ABC}, a=12{ }^{\circ} 96, b=9^{\circ} 78, C=57^{\circ} 48^{\prime} 32^{\prime \prime}$. Find $A$ and $B$ and the circumradius of the $\Delta$, using logarithms throughout.
7. Solve the equations-
(a) $\sin ^{2} \theta+\cos 2 \theta=\cos \theta$.
(b) $\tan ^{-1} 3 x-\tan ^{-1}(-2 x)=n \pi+\frac{3 \pi}{4}$.

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## HONOURS.

## Conics 1.

1. Prove that a linear equation in $x$ and $y$ denotes a straight line.
2. (a) Obtain the equations $x \cos \alpha+y \sin \alpha-p=0$, and $\left(x-x^{\prime}\right) / c=\left(y-y^{\prime}\right) / s=l$, and explain their parameters.
(b) Find the distance from $(4,6)$ to $3 x+2 y=4$ measured parallel to the bisector of the angle between the axes.
3. (a) Develop a rule for writing a line perpendicular to a given line.
(b) Prove that the altitudes of a triangle are concurrent.
4. Obtain the equation of the circle determined by the points $(1,1),(2,3),(4,2)$; and find its radius and the coordinates of its centre.
5. (a) Find the point inverse to $(x, y)$ with constant $k^{2}$.
(b) Deduce the form of the inverse of a circle.
6. Find the $m$-equation of a tangent to $y^{2}=4 a x$, and show that tangents at the end-points of a focal chord intersect at right angles on the directrix.
7. In the parabola $y^{2}=4 a x$ prove that the normal making an angle $45^{\circ}$ with the axis cuts the curve at $x=a$ and $x=9 a$.
8. The semi-axes of an ellipse are 5 and 3 , and the $x$ of $P$, a point on the curve, is 2 .
(a) Find the position of the foci.
(b) Find PS and PF, and the length of the normal at $P$.
9. State the two properties of Apollonius, and prove one of them.

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HONOURS.

## Calculus I.

1. (a) Find $\frac{d y}{d x}$ for (1) $y=x e^{\tan ^{-1} 2 x}$
(b) Find $\frac{d^{n} y}{d x^{n}}$ when $y=-4 /(x+a)^{5}$.
2. (a) Express the angle at which the curves $f(x, y)=0$ and $\phi(x, y)=0$ intersect as an inverse tangent.
(b) Show that the ellipses $2 x^{2}+y^{2}=c^{2}$ cut the parabolas $y^{2}=4 a x$ orthogonally.
3. (a) State the rules for determining maxima and minima and points of inflexion of $y=f(x)$.
(b) A $\log$ is in shape an elliptic cylinder, the semiaxes of whose cross-section are $a^{\prime \prime}$ and $b^{\prime \prime}$. Find the strongest rectangular beam that can be cut from it if the strength of a beam varies directly as its width and as the square of its depth.
4. (a) Derive the expression $\rho=\left(1+p^{2}\right)^{3 / 2} / q$ forthe radius of curvature.
(b) Find the equation of the evolute of the parabola $x^{2}=4 a y$.
5. (a) Employ Taylor's theorem to obtain the addition formula for $\sin (x-h)$.
(b) Given $x=\cos (\log . y)$ deduce the corresponding differential equation $\left(1-x^{2}\right) y_{2}-x y_{1}=y$.
6. (a) $\int_{1}^{e} x^{2}(\log \cdot x)^{2} d x$. (b) $\int \sqrt{a^{2}-x^{2}} d x$.

Employ the last integral to find the area of a circle.
7. The Witch of Agnesi is $x y^{2}=4 a^{2}(2 a-x)$.

Show that the whole area between the curve and its asymptote is $4 \pi a^{2}$.

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## HONOURS.

## Synthetic Solid Geometry.

1. (a) From a given point outside a plane draw a normal to the plane.
(b) A polyhedron has 6 square faces and 16 triangular faces. How many corners has it?
2. Find the volume of a parallelepided in terms of the three direction edges, $a, b, c$, and the three face angles at a corner. Show from the form of the result that ppds. may be divided into two classes.
3. Find the volume of a sphere as the sum of a system of infinitesimal laminae.
4. (a) State the theorems of Pappus for volumes and surfaces generated by moving figures.
(b) A semicircle revolves about a tangent which touches it twice as far from one end of the arc as from the other. The volume described is $\pi r^{3}\left(\pi-\frac{2}{3} \sqrt{3}\right)$.
(c) An arc of a circle subtends an angle of two radians at the centre. Show that the distance of the centre of figure of the arc from the centre of the circle equals half the chord of the arc.
5. A chord of a circle is projected to infinity. Show what figures are the projections of the circle, the tangents at the end points of the chord, the pole of the chord, and the centre line perpendicular to the chord.
6. A plane section of a right circular cone is the locus of a point which, being confined to one plane, so moves that its distance from a fixed point is in a constant ratio to its distance from a fixed straight line, all being complanar.
7. The sum of the angles of a spheric triangle is greater than two right angles and less than six right angles.

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## HONOURS.

## Spherical Trigonometry and Astronomy.

1. Develop a formula for finding the third side of a spheric triangle when two sides and the included angle are given, ( 1 ) by natural functions, and (2) by log-functions and an auxiliary angle.
2. Develope Delambre's formulæ, and thence deduce Napier's analogies.
3. Develope any formula for finding the spherical excess in terms of the sides.
4. If $\varphi_{1}, \varphi_{2}$ be the latitudes of two places and $\lambda$ be their difference in logitude, find (I) the distance from the one to the other along the loxodrome, (2) the angle at which the course cuts the meridian.
5. Define meridional parts in Mercator's projection, and explain how they are calculated.
6. The equinox is on March 2 Ist at $2^{h} 35^{m}$ Ios p.m., and the R.A. of Pollux is $7^{h} 38^{m} o^{s}$, at what time on June 20th will the star be on the meridian?
7. Explain how the sun's distance is found, (I) from a transit of Venus, (2) from the constant of aberration.
8. Show how the solar and lunar eclipse limits are found.

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HONOURS.
Modern Synthetic Geometry.
I. (a) In the pencil O. ABCP, prove $\sin \mathrm{AOB} . \sin$
$\mathrm{COP}+\sin \mathrm{BOC} . \sin \mathrm{AOP}+\sin \mathrm{COA} . \sin \mathrm{BOP}=0$.
(b) $\mathrm{X}, \mathrm{Y}, \mathrm{Z}$ are collinear points on the sides BC , $\mathrm{CA}, \mathrm{AB}$ respectively of a triangle. Show that one of the quantities $\sin \mathrm{A} \cdot \sin \mathrm{X}, \sin \mathrm{B} \cdot \sin \mathrm{Y}, \sin \mathrm{C} . \sin$ Z is equal to the sum of the other two.
2. Employ the equations $\Sigma(a . \mathrm{AL})=\Sigma(a)$. OL and $\Sigma\left(a . \mathrm{AP}^{2}\right)=\Sigma\left(a \cdot \mathrm{AO}^{2}\right)+\Sigma(a) . \mathrm{OP}^{2}$ respectively to prove the following for a regular pentagon :-
(a) The inradius is $\frac{1}{5}(d+2 s) \cos 18^{\circ}$, where $d$ is a diagonal and $s$ is a side.
(b) The square on the circumradius is $\frac{1}{5}\left(d^{2}+s^{2}\right)$.
3. Prove that the mid points of the diagonals of the complete quadrilateral are collinear.
4. Prove that the polars of any point with respect to all the circles of a co-axal system are concurrent ; and find the point of concurrence when the system is (a) of the common point species, (b) of the limiting point species.
5. Two circles touch three others similarly. Prove that the radical axis of the two is an axis of similitude of the three, and that the radical centre of the three is a centre of similitude of the two.
6. Show that if two anharmonic ratios for four distinct collinear points are equal and real, the other four are equal in pairs, and the values of the pairs are, $-\mathrm{I}, 2, \frac{1}{2}$ respectively.
7. (a) Prove that the ratio of the square on the common tangent of two circles to the rectangle on their diameters is unchanged by inversion.
(b) By inverting a system of four circles touching a straight line, prove the relation $t_{12} t_{34}+t_{23} t_{14}+$ $t_{31} t_{24}=0$ for four circles $s_{1}, s_{2}, s_{3}, s_{4}$, touching a fifth circle, where $t_{12}$ denotes the common tangent of $s_{1}$ and $s_{2}$, etc. ; and deduce Ptolemy's theorem for the concyclic quadrangle.
8. From the polar reciprocal of the theorem-" the bisectors of the angles of a triangle are concurrent, ' prove that bisectors of the angles between the joins of any point with the vertices of a triangle intersect the sides collinearly.

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## FINAL HONOURS.

## Differential Calculus II.

1. If $u=x^{t} \sin t x$, show that $u_{n}$
$=t^{(n)} x^{t-n} \sin t x+c_{1} t \cdot t^{(n-1)} x^{t-n+1} \sin \left\{t x+\frac{\pi}{2}\right\}$

$$
+c_{2} t^{2} \cdot t^{(n-2)} x^{t-n+2} \sin \left\{t x+\frac{2 \pi}{2}\right\}+\ldots
$$

where $\quad t^{(r)} \equiv t(t-1)(t-2) \ldots$ to $r$ factors.
2. In the expansion of $e^{a \sin -1 x}$ prove that $(n+1)$ $(n+2) a_{n+2}=\left(a^{2}+n^{2}\right) a_{n}$, where $a_{r}$ is the coefficient of $x_{r}$ in the expansion.
3. If $\phi x=x /\left(e^{x}-1\right)$,
(a) show that $e^{x} \phi x=x+\phi x$.
(b) Thence show that
$n \phi_{n-1}(\mathrm{o})+\frac{n(n-1)}{\mathrm{I} \cdot 2} \phi_{n-2}(\mathrm{o})+\ldots \phi(\mathrm{o})=0$.
(c) Show how (b) serves to calculate the Bernoullian numbers.
4. If $u=f x y$, find $\frac{d y}{d x}$ and also $\frac{d^{2} y}{d x^{2}}$ in terms of partial differentials of $u$.
5. For the curve $x^{\frac{2}{3}}+y^{\frac{2}{3}}=a^{\frac{2}{3}}$ prove that the locus of the point of intersection of perpendicular tangents is $r^{2}=\frac{1}{2} a^{2} \sin ^{2} 2 \alpha$, where $a \cos ^{3} \alpha=x$.
6. (a) Investigate a general method of finding the pedal of a given curve.
(b) Obtain the pedal of an ellipse, and show that it has imaginary branches through the origin.
7. (a) If $r=f \theta$ be a polar curve, show that it is concave or convex to the origin according as

$$
u+\frac{d^{2} u}{d \theta^{2}} \text { is }+, \text { or }-.
$$

(b) Examine $r\left(\sin \theta+\cos ^{2} \theta\right)=a$, as to a point of flexure.
8. (a) Find the tangential equation of $x^{3}+y^{3}=a$.
(b) Find the envelope of $\frac{x}{a}+\frac{y}{b}=1$ when $a^{2}+b^{2}=c^{2}$ where $c$ is constant.

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## FINAL HONOURS.

## Differential Equations.

I. Interpret geometrically the two first differential equations and the complete differential equation of $y=m x+b$.
2. (a) Separate the variables in

$$
(a x+b y+c) d x+\left(a^{\prime} x+b^{\prime} y+c^{\prime}\right) d y=0
$$

(b) Point out a case in which the general method of (a) fails, and find a solution for it.
3. (a) Give the geometrical interpretation of $p^{2}+$ $M p+N=0$, and deduce the form of the primitive.
(b) Find the conditions in (a) for the existence of envelope, cusp, node, or tac loci.
(c) What do the loci of (b) become in the orthogonal trajectories?
4. Find the equation of the curves which cut all concentric circles $x^{2}+y^{2}=r^{2}$ at the same angle.
5. Find two first integrals for $\left(1-x^{2}\right) q-x p+y=0$, and thence the complete primitive.
6. Prove $f(D) X=e^{a x} f(D+a) X e^{-a x}$; and use it to solve the linear equation $\frac{d y}{d x}+P y=Q$.
7. Solve (a) $y=p x+f(p)$
(b) $\left(D^{2}-4 D+4\right) y=x^{2}$
(c) $\left(x^{3} D^{3}-3 x^{2} D^{2}+7 x D-8\right) y=x^{3}$
(d) $D^{2} y-\left(x^{2}+x\right) D y+\left(x^{3}-2 x\right) y=0$.

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## FINAL HONOURS.

## Finite Differences.

1. Find the $n$th difference of $x^{3} 3^{x}$, and of $\sin (a x+b)$.
2. Prove that $\Delta^{n} x^{m}=(x+n)^{m}-n(x+n-1)^{m}+-\ldots$, and thence prove Wilson's theorem for integral numbers.
3. State and prove Herschel's theorem, and use it (a) to expand $\left(e^{D}-1\right)^{n}$ in powers of $D$.
(b) to prove the exponential theorem.
4. Find Lagrange's interpolation formula, and show that it applies for direct and inverse interpolation.
5. Find the integration formula that applies in summing $\frac{1}{3 \cdot 5 \cdot 7}+\frac{1}{5 \cdot 7 \cdot 9}+\ldots$, and find the sum of $n$ terms.
6. Develop the formula

$$
\Sigma u_{x} \varphi(x)=\Delta^{-1} u_{x} \varphi(x-1)-\Delta^{-2} u_{x} \Delta \varphi(x-2)+-\ldots
$$

and employ it to sum $x$ terms of the series

$$
\sin (a+b)+2 \sin (2 a+b)+3 \sin (3 a+b)+\ldots
$$

7. Develop the Euler-Maclaurin series, and thence show that

$$
\frac{n-\mathrm{I}}{n+\mathrm{I}}={ }^{n} C_{1} B_{1}-\frac{1}{2}^{n} C_{3} B_{3}+\frac{1}{3}^{n} C_{5} B_{5}-+\ldots
$$

- 

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## FINAL HONOURS.

## Trigonometry II.

I. Express $(a+i b)^{m+i n}$ as a complex quantity.
2. Develope $\cos \theta$ in powers of $\theta$ and the parameter $a$, and explain the development when $a=\frac{1}{2}$, $a=\mathrm{I}$, and $a=-\frac{1}{2}$.
3. Develope Machin's formula for $\pi$, and calculate the value of $\pi$ to 5 decimals.
4. If $\sum_{1}^{\infty} \frac{1}{n^{4}}: \sum_{1}^{8} \frac{\mathrm{I}}{n^{8}}=x: \pi^{4}$, find the value of $x$.
5. (a) Develope $\mathrm{I} /\left(\mathrm{r}-2 x \sin \theta+x^{2}\right)$ in terms of functions of multiples of $\theta$.
(b) Show that the limit of $\sin 2 \theta-\sin 4 \theta+\sin 6 \theta$ $-+\ldots$ is $\frac{1}{2} \tan \theta$.
6. (a) Sum the series whose $n$th terms are-$(-)^{n-1} \frac{x^{n}}{n} \sin n \theta$, and $(-)^{n-1} \frac{x^{n}}{n} \cos n \theta$.
(b) Show that the limit of $\sin \theta+\frac{1}{3} \sin 3 \theta+\frac{1}{5} \sin 5 \theta$ $++\ldots$ is $\frac{1}{4} \pi$; and find the limit of $\cos \theta+\frac{1}{3} \cos 3 \theta$ $+\frac{1}{5} \cos 5^{\theta}++\ldots$.

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## FINAL HONOURS.

## Quaternions.

1. Show that $S a(\rho-\gamma)=0$ is equivalent to $\rho=\gamma$ $+a \tau$, if $\tau$ is an arbitrary vector perpendicular to $a$. Explain the meaning of the equation.
2. $A C, B D$ are diagonals of a plgm., and $A E$ is equal and parallel to $B D$. Show that the plgm. on $A C$ and $B E$ as vectors $=3$ times the plgm. $A B C D$.
3. If $a, \beta, \gamma$ be vectors to the vertices of a triangle, show that $a+\beta+\gamma=3 \pi$ where $\pi$ is a vector to the centroid.
4. Show that $\sin a S U V \beta \gamma=S a \beta \gamma$, where $a, \beta, \gamma$ are unit vectors, and the angle of $\beta \gamma$ is $a$.
5. Interpret $\rho^{2}-2 S \rho \gamma=t^{2}$ as a geometrical property of a variable plgm. of which one side is fixed in length only, and the other is completely fixed.
6. Obtain the inverse of $\rho^{2}-2 S \rho \gamma=t^{2}$, and find the position of the centre of the inverse.
7. Find the [vector equation of the normal of a parabola, and prove that the subnormal is constant.
8. (a) If $\rho$ be the radius vector to a conic or a conicoid with centre as origin and $S \rho \phi \rho=\mathrm{I}$, interpret
(1) $\phi \rho$;
(2) $\psi \rho$;
(3) $\operatorname{SiU\phi \rho }$,
(4) $T V \rho_{1} \rho_{2}$.
(b) If $\rho_{1} \rho_{2}$ are conjugate prove that (4) is constant for the conic.

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## FINAL HONOURS.

## Conics II.

1. Prove $(a)$ that the two-dimensional terms equated to zero give lines parallel to the asymptotes; (b) the one dimensional terms equated to zero give the tangent at the origin, if $c=0$.
2. A line is divided harmonically by a point, a conic, and the polar of the point relative to the conic.
3. Prove that the chord of curvature through the focus for a point $P$ is equal to the focal chord parallel to the tangent at $P$.
4. Find an expression for the distance between the points $\alpha_{1} \beta_{1} \gamma_{1}$ and $\alpha_{2} \beta_{2} \gamma_{2}$.
5. Determine the condition that $\lambda \alpha+\mu \beta+\nu \gamma=0$ may touch $\sqrt{l \alpha}+\sqrt{m \beta}+\sqrt{n \gamma}=0$.
6. Find the equation of the circle which osculates $2 x^{2}+3 y^{2}-4 x y+2 x-6 y=0$ at the origin.
7. (a) Prove Brianchon's theorem for a conic.
(b) Given 5 tangents to a conic find the point of contact of any one.
8. If a pencil of four lines meets a conic, the two sets of points determined have the same anharmonic ratio at every point on the conic.

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## FINAL HONOURS.

## Determinants and Theory of Equations.

I. Evaluate $\left|\begin{array}{l}1234 \\ 3412 \\ 2143 \\ 4321\end{array}\right|$ by expanding it in terms of
the elements of (i) one row and one column, (ii) two columns.
2. $s_{r}$ is the sum of the $r^{\text {th }}$ powers of the roots of $x^{n}+p_{1} x^{n-1}+\cdots+p_{n}=0$. Show that $s_{n-1}+p_{1} s_{n-2}$ $+\cdots+p_{n-2} s_{1}+(n-1) p_{n-1}=\mathrm{o}$, and find $s_{r}$ in matrix form.
3. Show that $C\left(a_{1}, a_{2}, \ldots, a_{n}\right)=\varphi\left(\alpha_{1}\right) \cdot \varphi\left(\alpha_{2}\right) \ldots$ $\varphi\left(\alpha_{n}\right)$, where $\varphi(a)=a_{1}+a_{2} \alpha+\ldots+a_{n} \alpha^{n-1}$, and $\alpha_{1}$, $\alpha_{2}, \ldots$ are the roots of $x^{n}-1=0$.
4. (a) Prove the relation $\left.\left|\begin{array}{l}A_{11} A_{1 n} \\ A_{n 1} A_{n n}\end{array}\right|=\Delta \right\rvert\, a_{22}$ $\ldots . a_{n-1} a_{n-1}$ |.
(b) From (a) prove that $Q_{n} P_{n-1}-P_{n} Q_{n-1}=(-1)^{n}$ $b_{1} b_{2} \ldots b_{n}$ for the general continued fraction.
5. If $x^{r}+q_{1} x^{r-1}+q_{2} x^{r-2}+\ldots+q_{r}$ is a factor of $x^{n}+p_{1} x^{n-1}+p_{2} x^{n-2}+\ldots+p_{n}=f(x)$, then each $q$ is a root of some equation $x^{m}+s_{1} x^{m-1}+\ldots+s_{m}=0$ where $s_{1}, s_{2}, \ldots s_{m}$ are symmetric functions of the roots of $f(x)=0$ of orders $\mathrm{I}, 2, \ldots . m$ respectively.
6. Find, in any way, the reducing cubic of the general biquadratic, and the relations connecting the roots of the two.
7. Examine the signs of $f(x)$ and its first $m-1$ derivatives before and after a root $\alpha$ of $f(x)$, when $\alpha$ is (i) a single root, (ii) an $\bar{m}$-multiple root.

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FINAL HONOURS.

## Algebra 11.

1. (a) By examining the limit of $S_{n}$ and of the. remainder after $n$ terms, determine the convergency of
$\sum \frac{1}{n} \log \frac{(n+1)^{2}}{n(n+2)}$.
(b) Show that the limit of the product of two absolutely convergent series is the product of their limits ; and examine the truth of this for semi-convergent series.
2. Find the limits of the infinite series, -
(a) $2 x^{n} /(n-1)(n+2)$.
(b) $18 / 3!+32 / 4!+58 / 5!+108 / 6!+206 / 7!+\cdots \cdots$
3. In $\frac{b_{1}}{a_{1}}+\frac{b_{2}}{a_{2}}+\cdots$ and $\frac{b_{1}}{a_{1}}-\frac{b_{2}}{a_{2}}-\ldots ., a$ and $b$ are positive. Regarding the convergents as found by the rule, $(a)$ prove that they need not be in their lowest terms, (b) find how they converge towards the continued fraction, (c) find the conditions that their numerators and denominators may form increasing series.
4. Prove that $(a) a^{\varphi(m)}-1 \equiv 0(\bmod m)$ if $a$ is prime to $m$; and deduce Fermat's theorem, $(b)(m-\mathrm{I})!+\mathrm{I}$ $\equiv \mathrm{O}(\bmod m)$ where $m$ is prime.
5. (a) $n$ events are mutually independent. Find the probability that (i) at least one of them, (ii) only one of them, will happen on a specified occasion.
(b) A bag contains 6 balls. 3 are drawn and found to be red. Find the probability that 4 red balls will be drawn on a second trial.

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## FINAL HONOURS.

## Solid Geometry, Analytic.

I. (a) Develop the equation of a plane through $(a, b, c)$.
(b) A regular tetrahedron has a vertex at the origin, a median equally inclined to the co-ordinate axes, and an edge parallel to the $z=0$ plane. Find the equations to the faces meeting at the origin.
2. (a) Obtain the equation of the Hyperbolic paraboloid.
(b) Examine the Hyp. Par. for generating lines and for asymptotic planes.
3. Find the coordinates of the pole of $l x+m y+$ $n z=p$ with respect to the general sphere.
4. Prove that three confocal conicoids may pass through the same point, and give their characters.
5. Show how the rectangular terms are eliminated from the general equation, and explain the equation $s^{3}-S_{1} s^{2}+\mathrm{S}_{2} s-\Delta=0$.
6. Investigate the characters of the projections, on the co-ordinate planes, of the sections of $x^{2} / a^{2}+y^{2} / b^{2}$ $+2^{2} / c^{2}=1$ by $x^{2}+y^{2}+z^{2}=r^{2}$ for variations of $r$.
7. The semiaxes of an ellipsoid being $a, b, c$, find the radius of curvature at the end point of $c$ in the plane which bisects the angle between the planes $a c$ and $b c$.

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FINAL HONOURS.

## Integral Calculus.

I. Integrate the following :
(a) $d \theta /(a+b \cos \theta)$;
(b) $e^{x}\left(x^{2}+1\right) d x /(x+1)^{2}$;
(c) $\sin ^{2} \theta \cos ^{2} \theta d \theta /\left(\sin ^{3} \theta+\cos ^{3} \theta\right)^{2}$ between the limits $O$ and $\frac{1}{2} \pi$.
2. Show that the rectangular hyperbola is $y^{2}=$ $a^{2} \sinh ^{2} u$, and that the area included between the radius vector, the axis, and the curve is $a^{2} u$.
3. Find an expression for $\int d x /\left(x^{n}-1\right)$.
4. Obtain reduction formulae for
(a) $\int x^{m}\left(a+b x^{n}\right)^{p} d x$, so as to reduce $p$ and leave $m$ unchanged.
(b) $\int x^{m} d x /\left(a^{2}+2 b x+c x^{2}\right)^{1 / 2}$ so as to reduce $m$.
5. Obtain the value of $\int_{0}^{\infty} e^{-x^{2}} x^{2 n} d x$.
6. Prove that $\int_{0}^{1} \log . x d x /(1-x)=-\frac{1}{6} \pi^{2}$.

Queen's Unvversity Examinations: April, 1907.

## PRELIMINARY HONOUR PHYSICS.

## Dynamics A.

I. (a) If a particle moves under the action of a force towards a fixed point, prove that the radius vector from that point describes areas uniformly.
(b) Express the force (towards the centre) which will make a particle describe an ellipse with period $T$.
2. (a) Calculate the period of a conical pendulum.
(b) Find the relation between the distances and the periodic times of satellites revolving in circles about a planet.
3. (a) Write statements for motion of rotation corresponding to Newton's Laws of Motion.
(b) Explain how angular velocity is represented as a vector.
(c) Discuss the Foucault pendulum and find its period of rotation in any latitude.
4. Write the equations of motion of a cylinder on an inclined plane. What value must the coefficient of friction have that the cylinder may roll without slipping?
5. (a) Show that the moment of inertia of a circular cylinder about an axis through its centre perpendicular to its length is $M\left(\frac{1}{12} l^{2}+\frac{1}{4} r^{2}\right)$.
(b) A clock pendulum consists of a cylinder 20 cm . long, 6 cm . diameter, suspended by a weightless rod 90 cm . long. Find its period.
(c) How would the rate of the clock of (b) be changed by laying on top of the cylinder a small ring one hundredth of the weight of the cylinder?

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## PRELIMINARY HONOUR PHYSICS.

## Dynamics B.

I. The face of a dam is inclined at $10^{\circ}$ to the vertical. It contains a door, 2 feet square, hinged horizontally. Find the head of water on the door when the centre of pressure is II inches from its lowest edge.
2. Establish the relation connecting the curvature of a surface and its tension with the difference of pressure maintained by it.
3. A drop of water, 6 mm . diameter $(T=75)$ is placed between two flat plates. The plates are then pushed together until they strike three small stops (o. I mm. thick) set symmetrically about the drop. Find the compression on each stop.
4. (a) Establish the connection between the vapour pressure and the curvature of the liquid surface.
(b) Discuss the application of the above to the formation of rain.
5. Explain the statement that a simple shear $(\theta)$ may be regarded as an extension ( $e$ ) and an equal contraction at right angles to one another. Find the relation between $\theta$ and $e$.
6. (a) Express the potential energy of unit volume of a strained body.
(b) Find the work done in bending a steel rod, 5 mm . square, 1 m . long, into an arc whose radius of curvature is $2.5 \mathrm{~m} . \quad E=2.1 \times 10^{12}$ dynes $/ \mathrm{cm} .^{2}$.
7. Interpret the equation $y=a \sin b(x-V t)$, explaining the meaning of each letter. Write the equation of a stationary wave and show that it is the resultant of two waves moving in opposite directions.

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## EXPERIMENTAL HONOUR PHYSICS.

i. State Newton's Laws of Motion, explain their meaning and indicate the nature of the evidence of their truth. Write parallel statements for motion of rotation.
2. Explain the meaning of stress, strain, fatigue. Describe a method of measuring one of the coefficients of elasticity.
3. Describe a method of studying the timbre of sounds indicating what it has shown about the nature of vowels.
4. Explain fully the relation between the surface tension of a liquid and its boiling point. What precautions are necessary in determining the boiling point of a liquid?
5. Steam at $100^{\circ} \mathrm{C}$ is passed into a salt solution at $100^{\circ}$. The temperature rises to $105^{\circ}$. Explain.
6. Outline the 3 -colour method of natural colour photography.
7. How do we obtain the fundamental units in the electrostatic and electromagnetic systems? What is the relation of the practical system to the latter?
8. How are the ampere, ohm, and volt defined for commercial purposes? Indicate how any one of these definitions could be obtained experimentally.

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## Preliminary Honour Physics.

## Heat. <br> [Omit one question.]

I. (a) Deduce the Clapeyron-Clausius equation, using the $T S$ and $P v$ diagrams.
(b) Calculate the freezing point of water under a pressure of 100 atmospheres, assuming that the change in freezing point is proportional to the pressure. The density of ice is 917 .
2. (a) Prove that the vapour pressure over an aqueous solution is less than the vapour pressure over pure water by an amount proportional to the osmotic pressure of the solution.
(b) Show that the boiling point of a solution is higher than that of the pure solvent.
3. (a). Discuss briefly, "reversible processes," and the "second law of thermodynamics."
(b) Outline the steps in the deduction of the mathematical statement of the second law.
4. Show that the change in entropy of a unit mass of an ideal gas, whose initial state is given by $v_{n}, T_{o}$, and final state by $v, T$, is

$$
C_{v} \log \frac{T_{o}}{T}+R \log \frac{v_{o}}{v}
$$

5. (a) Explain the difference in behavior between the saturated vapours of ether and water by means of the temperature-entropy diagram.
(b) Explain the statement of Clausius, "The entropy of the universe tends toward a maximum."
6. (a) Explain the terms isothermal, isopiestic, isometric, adiabatic, triple point.
(b) Draw a diagram of the isothermals near the critical point and give a short description of the properties of matter near the critical point.
7. Deduce the equation of the adiabatic for an ideal gas in terms of pressure and temperature.

Queen's University Examınations : April, 1907.

FACULTY OF ARTS. PRELIMINARY HONOUR PHYSICS.

Mathematical Theory of Electricity and Magnetism.

## FACULTY OF PRACTICAL SCIENCE.

## Physics IV.

I. Calculate the quantity of electricity required to increase the diameter of a soap bubble from 9 centimetres to io centimetres merely by charging it. Surface tension of solution $=65$ dynes per centimetre. Atmospheric pressure 76 centimetres of mercury.
2. A condenser consists of 200 circular sheets of tinfoil separated by mica 0.4 millimetre thick and of specific inductive capacity $6 \cdot 6$. What must be the radius of the sheets if the condenser is to have a capacity of $1 / 3$ of a microfarad.

1 $\mathrm{mfd} .=9 \times 10^{5}$ electrostatic units of capacity.
3. Write short notes on :
(a) Gaseous ions.
(b) Saturation current.
(c) Electrons or corpuscies.
(d) Alpha rays.
4. Show that the work done per cubic centimetre in one complete cycle of magnetization is given by the area of the hysteresis loop (in terms of $B$ and $H$ ) divided by $4 \pi$.
5. A "trapeze earth inductor" is formed of a copper bar 2 metres long, which is suspended from the ceiling by two parallel copper wires 3 metres long. If the circuit be completed so that its total resistance is 150 ohms, find the quantity of electricity generated by swinging the bar from through an arc whose semivertical angle is $45^{\circ}$. Earth's field $H=0{ }^{\circ} 16$. Dip. $=75^{\circ}$. I ohm $=10^{\circ}$ electromagnetic units.
6. Give a short account of the determination of " $v$ " by the measurements of a capacity.
7. What is meant by "resonance" in connection with a transmission line?

Queen's University Examinations : April, 1907.

## FINAL HONOUR PHYSICS.

## Optics.

i. (a) Interpret the equations of which the following are types:

$$
\begin{aligned}
4 \pi p & =\frac{\partial \gamma}{\partial y}-\frac{\partial \beta}{\partial z} \\
-\frac{\mu}{c} \frac{\partial \alpha}{\partial t} & =\frac{\partial Z}{\partial y}-\frac{\partial Y}{\partial z}
\end{aligned}
$$

(b) Express the component of the electric current (i) for a transparent body, (ii) for a conductor, (iii) for a nonconductor in which there are charged electrons.
(c) From the equations of (a) derive the differential equation of the electric vector for case (i).
2. Give Huygens' construction for the wave front of a plane wave refracted at a plane surface. Show how it is modified in crystals, explaining the axes of "single ray" and "single wave" velocity.
3. Describe the appearance of the following sections when placed between crossed Nicols in convergent light, giving an explanation in the first case : (a) calcite ppd. to axis, (b) calcite parallel to axis, (c) quartz ppd. to axis, (d) a biaxial equally inclined to both axes; (e) a biaxial ppd. to one axis.
4. In studying spectral lines indicate the relative advantages of plane and concave gratings, and Michelson and other interferometers.
5. Indicate the extent to which the electro-magnetic theory has been successful in explaining the phenomena of optics.
-

Queen's University Examinations : April, 1907.

## Final Honour Physics.

## Dynamics.

[Omit one question.]

1. Solve by Principle of Virtual Work: A weightless rod $A B$ of length $l$ rests on a horizontal cylinder $C$, whose axis is at right angles to the vertical plane through the rod; its lower end $A$ leans against a vertical wall, and from its upper end a weight $W$ is suspended. The distance from the point of support on $C$ to the wall is $a$. Determine the position of equilibrium.
2. (a) Show that the potential due to a hollow sphere at a point whose distance from the centre is $h$, is equal to $\frac{M}{h}$.
(b) Show that the potential inside a hollow sphere is constant and the force vanishes.
3. (a) The equation of a vibrating string is

$$
\frac{\partial^{2} y}{\partial t^{2}}=a^{2} \frac{\partial^{2} y}{\partial x^{2}}
$$

Solve by means of Lamés product as far as the introduction of Fourier's series.
(b) Show how Fourier's series may represent any arbitrary function of $x$, explaining the method of evaluating the coefficients.
4. If $x$ is the distance of a particle from rest at any time $t$, show that the motion represented by the equation

$$
\frac{d^{2} x}{d t^{2}}=-k x
$$

is periodic and calculate the period.
5. (a) State and explain the "Principle of d'Alembert. "
(b) Explain the term "force function," and show how the existence of a force function may be determined.
6. Show that the speed necessary for a body moving away from the earth in order that it may never return is $\quad V=\sqrt{2 g R}$.
7. Deduce the "Principle of kinetic energy and work, " from the equations of motion ;-

$$
\begin{aligned}
& m \frac{d^{2} x}{d t^{2}}=X \\
& m \frac{d^{2} y}{d t^{2}}=Y \\
& m \frac{d^{2} z}{d t^{2}}=Z
\end{aligned}
$$

Queen's Iniversity Eaminations: April, 1907.

## FACULTY OF AR'TS.

## Final Honour Physics.

## Electricity and Magnetism.

1. (a) Discuss mathematically the discharge of a condenser.
(b) Write short notes on the experimental evidence bearing on your conclusions.
2. "A system of charged bodies, magnets, cirenits, carrying electric currents, and the ether, forms a selfcontained system subject to the laws of dynamics."
(a) Explain Prof. J. J. Thomson's point of view in the above.
(b) Why does he italicize the words "and the ether"?
3. (a) What is ionisation by collision?
(b) Give an instance of its occurrence.
4. Deseribe the determination of the charge carried by gaseous ions.
5. In some of Hittorf's experiments on the discharge through highly evacuated tubes in magnetic fields, he found the cathode rays twisted into a helix.
(a) What conditions are necessary to produce a right circular helix?
(b) Obtain a value for the pitch of the helix.
6. Describe Rutherford's experiment by which he proved that the "excited activity" from radium was a product of the decay of the emanation.
7. Write notes on (a) the production of Helium in radio-active decay. (b) The connection between uranium and radium. (c) The radio-activity of common materials.

Queen's University Examinations : April, 1907.

## PRELIMINARY HONOURS.

## BOTANY.

## FIRST PAPER.

I. Describe the evolution of sexual reproduction in plants, employing Spirogyra, Fucus, Mucor, and Vaucheria, to illustrate the stages.
2. Describe the contribution of each of the following named groups towards the form, the structure, or the reproduction of the higher plants:-Red Algae, Liverworts, Mosses, Ferns, Horsetails and Clubmosses.
3. Describe the gametophyte as to form and relative importance, in each of the following named groups :-Green Algae, Liverworts, Mosses, Homosporous Ferns, Heterosporous Ferns, Lycopods, and Spermatophytes.

4- Describe in Pinus the microsporophyll, microspore, megasporophyll, megaspore, and process of fertilization,
5. Define a seed ; distinguish spermatophytes from pteridophytes; and describe the development of the female gametophyte in angiosperms (1) before fertilization (2) after fertilization.
6. Trace the evident tendencies in the evolution of flowers, mentioning plants that illustrate the various changes, and the probable contributing causes.

Queen's University Examinations : April, 1907.

## PRELIMINARY HONOURS.

## BOTANY.

Practical Examination.
Classify under the headings :-class, order, genus, species,-the plants submitted.

Queen's University Examinations : April, 1907.

## PRELIMINARY HONOURS.

## BOTANY.

> SECOND PAPER.
I. Define :-germination of seed, hypocotyl, testa, tegmen, akene, berry and drupe.
2. Describe the following tissues and state their uses in the plant:-parenchyma, collenchyma, schlerenchyma, tracheary vessels, tracheids, and sieve vessels.
3. Describe the structure of the cortex, the stele, and the pith with its extensions, in an herbaceous exogen, and in a woody exogen. Illustrate by diagrams.
4. Describe carefully the process of diffusion of solutions through such membranes as vegetable cell walls, and indicate how osmotic pressure is thus produced.
5. Trace the course of water from the soil into and through a tall herb, telling why the water is needed.
6. Describe photosynthesis under the headings :sources of raw materials, source of energy, necessary conditions, chemical reactions, and digestions of the products.
7. Describe as fully as possible the process of respiration in plants, noting the conditions and structures necessary, the chemical reactions, and their resultants.

Queen's University Exammations : April, 1907.
FINAL HONOURS.

## BOTANY.

FIRST PAPER.
Practical Work.
A.
I. Make a list, in the following tabular form, of the plants submitted :

| No. | Order. | Genus. | Species. |
| :--- | :--- | :--- | :--- |
|  |  |  |  |

2. From the plants submitted, select one from each of the following groups and describe $(a)$ its structure, (b) its mode of reproduction :
I. Algae.
3. Fungi.
4. Hepaticae.
5. Musci.
B.
6. Make a list of the plants submitted in the form above.
7. Select one specimen from each of the following orders and describe under the heads (1) Order, (2) Genus, (3) Species :
I. Cyperaceae.
8. Gramineae.
9. Filices.
10. Lycopodiaceae.

Queen's University Examinations : April, 1907.

> FACULTY OF ARTS.

## PRELIMINARY HONOUR BIOLOGY.

## Physiology.

I. Explain what is meant by cell multiplication and cell differentiation in the Embryo. What tissues and organs form first in the Embryo?
2. Distinguish the two principal classes of articulations, and describe examples of the different kinds of each class.
3. What is the work of the muscles? Point out the different purposes which the contraction of muscles serves in the body.
4. Describe the minute structure of (a) the heart, (b) of a medium sized artery, and (c) of a blood capillary.
5. What is the composition of a normal diet? Specify the circumstances which necessarily cause marked variations from this normal. Describe the changes which the food stuffs undergo during their passage through the columnar cells of the intestine.
6. Enumerate the principal constituents of bile, and specify their relation to the food stuffs, or to other tissues in the body.
$=$
7. A man engages in violent athletic exercise. Specify the effects of the unusual exertion upon different functions of the body.
8. Define a nerve centre. Specify some important centres in the brain and medulla. Indicate circumstances which affect the respiratory centre.
9. State the law of specific sensation of nerve fibres, and describe the distribution and endings of the nerves of taste.

Queen's University Examinations: April, 1907.

## Junior Histology.

PRELIMINARY HONOURS ARTS.
r. Write notes on : Tissue, cell, a villus, Peyer's Patch, glomerulus.
2. Give distribution of Stratified Squamous Epithelium, Involuntary Muscle.
3. Draw and name parts of (a) Artery, (b) Liver lobule.
4. Draw and describe a motor neuron from the anterior horn of spinal cord.

Queen's University Examinations : April, 1907.

## Final Honour Botany.

SECOND PAPER.

## Morphology and Histology.

1. How are normal and adventitious members of plants distinguished from each other?
2. Lateral members on a common axis exhibit the three following modes of arrangement : (I) Radial, (2) Isobilateral, (3) Dorsiventral. Describe any two of them and give examples.
3. Describe any three different kinds of roots and give examples.
4. How do the gametes of isogamous and heterogamous plants differ from each other?
5. How are Leucoplastids and Chloroplastids distinguished from each other, and what purposes do they serve?
6. Describe two modes of cell formation without division of the cytoplasm.
7. Describe any two of the seven forms of Tissues.
8. Describe the mitotic division of the nucleus.
9. A tree may be wounded by cutting off a branch, or making a notch in its side. By what process may it be healed?
10. Describe the cambium ring and explain its uses.

Queen's Universty Examinations: April, 1907.

FINAL HONOUR BOTANY.

## Vegetable Physiology.

THIRD PAPER.

I. "The functions of the plant can only be carried on under a certain coincidence of favourable external conditions." Mention any four of these conditions, and describe the effects of any two of them.
2. Explain or describe the physiological function of the Tracheal tissue of the Xylem.
3. The two great functions subserved by the foliage leaves of land plants are (i) the construction of organic substance from the raw materials of the food, and (2) the exhalation of watery vapor, or transpiration. Explain how either of these objects is accomplished.
4. Explain the functions of chlorophyll in the plant.
5. How is the function of absorption in living plants affected by the presence of protoplasm in the cells ?
6. The spontaneous movements of plants may be considered under two heads : (I) movements of protoplasm, and (2) movements of cellular members. Describe or explain either of these.
7. What external conditions affect the activity of (I) transpiration and (2) respiration.
8. Describe or explain either of the two kinds of irritability known as Heliotropism and Geotropism.

Queen's University Examinatzons : April, 1907.

## FẠCULTY OF ARTS.

## Final Honour Physiology and Second Year in Medicine.

1. Give the composition of blood pasma and indicate as far as possible the source of each constituent.
2. Describe the action of the constant current on muscle and on nerve.
3. How is the work done per day by the heart calculated? What is the duration of each phase of the heart beat? How measured? What is the function of the depressor nerve?
4. How do somatic vaso-motor neurones differ from splanchnic vaso-motor neurones in the sympathetic gauglia? Point out differences between vaso-delator effects and vaso-constrictor effects in the kidney.
5. Describe the muscular and nervous mechanism of movements of the eyeballs.
6. What are the proofs that oxidation takes place chiefly in the tissues and not in the blood? What tissues are the principal heat producers? Explain how section of the spinal cord at different levels affects the temperature of the body. Indicate how the energy of the body is expended.
7. Name the ductless glands and discuss their general physiology.
8. Describe the neuro-epithelium of the ear. Trace the path of nerve impulses from the retina to the visual centres. [Use a diagram].
9. How have the functions of the cerebellum been demonstrated? Of the cerebrum?
io. Indicate the conduction paths for touch, muscular sense, temperature and pain in the spinal cord.

Queen's University Examinations : April, 1907•

## Senior Histology.

FINAL HONOUR ARTS AND SECOND YEAR IN MEDICINE.
I. Describe and give distribution of (a) Ciliated epithelium.
(b) Hyaline cartilage.
2. Draw and name all parts shown in (a) retina, (b) cerebellum.
3. Give the histology ( L ) and ( H ) power of $(a)$ lung, (b) small intestine.
4. Write explanatory notes on Haversian system, glomerulus, perineurium, oxyntic cell, polarity of cells.
5. Draw, describe and identify specimens submitted.

Queen's University Examinations : April, 1907•

## Systematic Zoology.

$\qquad$

1. Give the names and chief distinguishing characteristics of the different classes into which the Vertebrates are divided.
2. Define the following terms, giving an example of the correct use of each :-altricial, precocial, placental, marsupium, plantigrade, interclavicle, lores, palmate, and lobate.
3. Name the chief groups belonging to the order Ungulata, and give the distinguishing features of the order.
4. Describe the Marsupialia under the headings: distribution ; forms as related to the chief factors of environment ; characteristics.
5. Define the Amphibia, and state the distinctions separating the three orders.
6. What are the chief points of distinction among the three sub-orders of Pices, inhabiting our fresh waters?


Queen's University E.caminations: December, 1906.

## Preliminary Honour Chemistry.

## Crystallography.

1. Sketch the models submitted, letter the faces in the sketches, and name the forms present, giving Weiss' symbols for one face of each form.
2. Give (a) the symmetry of the orthorhombic system, (b) the simple forms of the monoclinic system, (c) the crystallographic axes of the triclinic system.
3. Give (a) the hemihedral forms produced by parallel faced hemihedrism in the cubic system, (b) the two important hemihedral forms produced by the method of selecting alternate didodecants in the Hexagonal system.
4. Show how the tetragonal and hexagonal pyramids of the third order are formed.
5. Give a definite practical example of the use of a knowledge of crystallography to the chemist or physician.

Queen's University Examinatzons : April, 1907.

## PRÉLIMINARY HONOURS.

## Physiological Chemistry,

1. "The chemical processes which take place in the animal body are essentially of the character of hydrations and oxidations". Discuss this fully.
2. Discuss the physiological and pathological aspects of the dibasic acids of the oxalic series.
3. Trace the reactions by which in the animal body the amido acids are converted into acids containing no nitrogen, and these in their turn are converted into acids lower in the series.
4. Discuss the kreatins.
5. Trace the relationships of arginin, ornithin, and putrescin.
6. Outline the chemistry of lecithins.
7. Write notes on the ptomaïnes.

Queen's University Examinations : April, 1907.

## PRELIMINARY HONOURS.

## Organic Chemistry.

1. Discuss the constitution of grape sugar and of the glucose group.
2. Write an account of the chemistry of aniline.
3. Discuss the constitution of caffeine, and show its relation to uric acid.
4. Discuss the isomerism between citraconic and mesaconic acids. Mention and describe similar cases.
5. (a) Explain the reactions which take place in the preparation of ethyl acetoacetate.
(b) Describe the synthetic uses of this compound.
6. Describe allyl alcohol and its derivatives.
7. (a) Discuss acyl chlorides and compare with corresponding inorganic compounds.
(b) Describe acetyl chloride under the heads (i) preparation, (2) properties, (3) uses in investigation and synthesis.
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Queen's University Examinations : April, 1907.

HONOURS.

## Organic Chemistry.

## Extra-mural.

(N.B.-Not more than eight questions to be attempted).
I. Compare and contrast the action of phosphorus pentachloride upon aldehyde, alcohol, and acetic acid and the nature of the substances produced.
2. Explain the theory of the preparation of ordinary ether. What bearing has the mode of preparation on the constitutional formula of ether?
3. The nitrites and the nitro-compounds are regarded as isomeric. What is the ground for this? Contrast the chief reactions of one member of each of these groups.
4. Describe the system of classification adopted in the case of the carbohydrates: or, tell how the hydrolysis of starch, cellulose, cane sugar, inulin, and glycogen can be effected, and state the properties of their hydrolytic products.
5. Discuss the chief natural sources and chemical relationships of succinic, malic, and tartaric acids, and show how these acids may be changed into each other ; or, describe how citric acid has been synthetically prepared and its constitution determined.
6. How are the three mononitrophenols obtained? How are the ortho- and para-compounds distinguished, and for what purpose is the para-compound employed?
7. Describe some of the properties of the sulphonic acids. Explain how benzene, chlorobenzene, phenol, and phenyl cyanide may be obtained from benzene sulphonic acid.
8. Describe salicylic acid. How may it be converted into phenol, benzene, and benzoic acid?
9. Calculate the percentage of nitrogen from the following data: 0.5 gramme of the substance was decomposed and distilled with caustic soda, and the ammonia collected in 50 c.c. of normal sulphuric acid. The acid then required 33.6 c.c. of normal caustic solution for neutralisation.
10. Discuss the mode of preparation, the constitutional formula, and the reactions, of any medicinal organic compound not already treated of.

FACULTY OF ARTS (HONOURS) AND faculty of practical science (Courses b.C.D.)

## Physical Chemistry.

(Not more than eight questions to be attempted).
i. Trace the steps necessary for the drawing up of the atomic weights as now accepted.
2. Show the connection between the two most important specific heats of gases.
3. Discuss the subject of phases in a mixture of two liquids, or the transition of one allotropic form to another.
4. Prove Boyle's Law, starting out from the fundameutal assumption of the kinetic theory of gases ; or assuming Boyle's Law, derive the speed of the molecules.
5. How can the heat of combination of a hydro carbon be best determined?
6. Discuss homologous series or optical activity or specific magnetic rotation.
7. Work out the connection between osmotic pressure and the relative lowering of the vapour pressure of a solution.
8. Describe some experimental method of determining the lowering of the freezing point by the addition of a solute to a solvent.
9. Discuss the conditions that determine the conductivity of electrolytes.
10. Derive the formula for the dissociation constant in wcak electrolytes.
ir. Discuss any one of the methods for determining the relative strength of acids.

Queen's Unvversity Examinations : April, 1907.

FINAL HONOURS. History of Chemistry.

Discuss five of the following subjects:
i. The Atomic Theory.
2. The development of the idea of chemical composition.
3. Iatrochemistry.
4. The discovery of oxygen and the influence of this discovery on the history of chemistry.
5. Pasteur's contributions to chemistry.
6. Cavendish.
7. Berzelius.
8. Mayow.
9. Bunsen.
10. Gerhardt and Laurent.
iI. Alchemy and the Alchemists.

Queen's University Examinations : April, 1907.
FACULTY OF ARTS.

PRELIMINARY HONOURS.

## Mineralogy.

## Crystallography.

1. Sketch any three simple forms of the isometric system and show the positions of the crystallographic axes-principal and secondary.
2. Using all the simple forms of the monoclinic system, illustrate Miller's system of notation.
3. Give a detailed account of the hemihedrism in the hexagonal system.
4. Describe the various methods of twinning in the hexagonal system.
5. Name the forms on the crystals submitted.

Queen's University Exammatzons : April, 1907.

FACULTY OF ARTS.

PRELIMINARY HONOURS.

## Mineralogy.

## Systematic Mineralogy.

I. A mineral is defined in part as "a (I) natural, (2) homogeneous, (3) inorganic, (4) solid body." Criticize each of these.
2. Give in detail three cases of "the regular growing together of dissimilar mineral substances."
3. Using examples, show what is meant by (a) parallel growth, (b) hardness curve, (c) asterism.
4. Suppose one finds a transparent crystal-evidently monoclinic. Explain all the steps necessary for its complete identification.
5. Explain (1) the construction, (2) the action, and (3) the use of the quartz-wedge in connection with optical mineralogy.

Queen's University Examinations : April, 1907.

## FACULTY OF ARTS.

## FINAL HONOURS.

Mineralogy.
Descriptive and Determinative.
r. Discuss the metal antimony as a mineral forming element.
2. Describe one of the following
(a) the garnet group.
(b) the nepheline group.
(c) the olivine group.
3. Give the crystallography of the mineral fluorite.
4. Describe the zeolite family.
Practical.
5. Determine the lettered specimens by field tests and the numbered ones by the blowpipe.

Queen's University Examinations : April, 1907.
faculties of arts and practical science.

## Geology of Canada.

Note.-Candidates in Arts and in Course C (Mineralogy and Geolngy) will take the whole paper ; others will take any six questions.
I. Discuss the Laurentian Plateau under the following heads :-Areal extent, topography, general character of the rocks, and the chief non-metallic products.
2. Outline roughly the area occupied by Devonian rocks in Ontario, name the chief fossils and economic products.
3. Distinguish between brachiopod and lamellibranch ; gasteropod and cepbalopod ; arthropod and pteropod ; and give extinct examples of each species.
4. Discuss briefly the Interior Continental Plain of Canada.
5. Write notes on the following topics :-Saugeen clay, Leida clay, Champlain fault, Quebec Group.
6. Describe the gold bearing district of Nova Scotia.
7. Describe the Coast range of British Columbia, noting the topography, kind of rocks, geological age, and effects on climate.
8. Classify the Pre-Cambrian formations of Canada and discuss the relationship of the Laurentian and Keewatin.

Queen's University Examinations : April, 1907.

FACULTIES OF ARTS AND PRACTICAL SCIENCE.

## Preliminary Geology and Geology II.

I. Summarize the evidence that glaciers move.
2. From the contours of sea-cliffs which would you consider to be, in general, the more efficient agent of destruction, weathering or the wave? Give reasons tor your answer.
3. Demonstrate that the ocean basins are over-full. Assign the cause.
4. Why are barriers and fringing reefs interrupted at the mouths of rivers ?
5. Compare the streams of arid and humid districts.
6. Prove that the coast of British Columbia has been depressed in recent geological times.
7. Define unconformity, and explain the full significance of the phenomenon.
8. Discuss the causes of earthquakes.
9. How do mountains originate ?
10. Mention some of the more important effects of oxidation on the surface of the earth.


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Queen's University Examinations : April, 1907.
FACULTIES OF ARTS AND PRACTICAL SCIENCE.

## Preliminary Geology and Geology ili.

I. Show by word or diagram the difference between the interference figures given by sections of uniaxial and biaxial minerals, cut at right angles to an optic axis.
2. In what way does a biaxial mineral differ from a uniaxial mineral in the phenomenon of pleochroism ?
3. What physical properties of minerals are most useful in their petrographical determination.

## 4. Discuss rock classification.

5. How would you distinguish under the mi-croscope-diallage and hypersthene ; quartz and orthoclase ; biotite and basaltic hornblende ?
6. Mention the usual order of crystallization of rock-forming minerals in a magma.
7. Define the terms batholite, intrusive-sheet and sill, and state the textures that the rocks in each might be expected to possess.
8. Describe the rocks-granite, a northosite, norite, amphibolite, melaphyre, and mention a Canadian occurrence of each.
9. What rocks might be formed through the weathering of a gabbro ?
10. A schist is found to have the following composition :- $\mathrm{SiO}_{2} 53.33 ; \mathrm{TiO}_{2} 0.9 ; \mathrm{Al}_{2} \mathrm{O}_{3}$ 24.3 ; $\mathrm{Fe}_{2} \mathrm{O}_{3} 2.64$; $\mathrm{FeO} 5.4 ; \mathrm{MgO} 2.62$; CaO $0.39 ; \mathrm{Na}_{2} \mathrm{O} 0.73 ; \mathrm{K}_{2} \mathrm{O} 3.4 \mathrm{I} ; \mathrm{H}_{2} \mathrm{O} 4.5$. Show how its origin may be deduced from this information.

Queen's University Examinations : April, 1907.

FACULTIES OF ARTS AND PRACTICAL SCIENCE.

## Geology IV.

1. Mention three important modes of occurrence of ores and state the distinguishing features of each.
2. Discuss the ways in which ores may vary with depth and point out the changes most likely to occur.
3. In what ways may igneous rocks affect the formation of ore deposits ?
4. Account for the fact that the ore in a vein is usually restricted to certain portions of that vein?
5. Mention some of the effects of mineralization upon the country rocks of ore deposits,
6. What assemblage of minerals is commonly found in copper lodes ?
7. Show how a knowledge of geology may assist in intelligently developing an ore-deposit.
8. If in driving on a vein you encounter a fault, how would you set about locating the continuation of the vein?
9. Name the ecomomic minerals you would expect to occur as residual deposits.
ro. How would you determine whether an ore body lying in a sedimentary formation was a bed, a bedded vein, or an impregnated or replaced bed?

Queen's Unızersity Examinations : Aprıl, 1907.
FACULTIES OF ARTS AND PRACTICAL SCIENCE

## Final Geology and Geology VI.

First Paper.

1. What light is cast upon geological problems by the products of volcanoes?
2. Enumerate the causes of elevation and depression of the earth's surface.
3. Explain fully how streams in some parts of England can continue to flow after, i8 months of local drought.
4. In what respects does the sand brought out by streams from beneath a glacier differ from ordinary river sand?
5. How may a plain of marine erosion be distinguished from a peneplain?
6. How would you recognize worn out mountains?
7. Account for the prevalent states of maturity of the rivers of to-day.
8. Upon what does the outline of a coast depend ?
9. Name all the evidence that might be looked for to prove that in the recent geological past the valleys of B. C. contained far larger glaciers than at present.
ro. Account for a wide-floored valley with hanging tributary valleys.

Queen's University Examinations : April, 1907.

FACULTIES OF ARTS AND PRACTICAL SCIENCE

## Final Geology and Geology VI.

Second Paper.

1. Mention three of the founders of geology and give a brief account of their achievements.
2. Discuss fully the classification of the PreCambrian.
3. Draw a map of North America at the beginning of the Palaeozoic era.
4. Subdivide the Silurian and mention type fossils characteristic of each subdivision.
5. Discuss the limitations to be placed on the use of fossils and of lithological resemblances in correlatig widely separated strata.
6. Trace the evolution of the horse.

Queen's University Examinations : April, 1907

FACULTIES OF ARTS ASD PRACTICAL SCIENCE

## Final Petrography and Geology ViI.

1. Mention the chief rock-forming amphiboles and pyroxenes and show how they may be distinguished by petrographical means.
2. What is meant by consanguinity as applied to rocks? Give an example of a petrographical province,
3. Compare and contrast contact and dynamometamorphism.
4. Describe the Gabbro family of igneous rocks.
5. Give a list of minerals found (a) only in rocks of igneous origin ; (b) only in rocks of aqueous origin; (c) common to both classes of rocks.
6. Describe the rocks-monzonite, minette, dacite, wacke, eclogite.
7. On Trembling Mt. and on Trembling Lake, north of Montreal, two Archean gneisses occur which have the composition given below, discuss the origin of these gneisses.

| I <br> Gneiss, <br> Trembling Mt. |  | II <br> Trembling Lake |
| :---: | :---: | :---: |
| 69.24 | $\cdots$ | 57.66 |
| 14.85 | $\cdots$ | 22.83 |
| 2.62 | $\cdots$ |  |
|  | $\cdots \cdots$ | 7.74 |
| .45 | $\cdots$ | Tr. |
| 2.10 | $\cdots$ | I.16 |
| .97 | $\cdots$ | 3.56 |
| 4.30 | $\cdots$ | .60 |
| 4.33 | $\cdots$ | 5.72 |
| .70 | $\cdots$ | 1.50 |
| 99.56 |  | 100.77 |

Queen's U'niversity Examinations: April, 1907.
faculties of Arts And practical science

## Final Economic Geology and Geology VIII.

I. Give the causes and conditions for the bituminization of coals.
2. Write a short paper on petroleum in Canada.
3. Describe the gold fields of the Rand.
4. Mention the occurrences of platinum in Canada and point out the most promising districts for prospecting.
5. How do diamonds occur? Where might they occur in Canada?
6. Mention the uses of limestone and the qualities desired in the stone for each particular use.
7. Under the headings character. origin, uses and productive districts, write notes on bauxite, talc, pyrite, cinnibar, chrome-iron.

BACHELOR OF PEDAGOGY PAPERS.

Queen's University Examinations : April, 1907.

## Bachelor of Pedagogy.

## Section A. I.

i. Give Adeimantus' theories of justice. Discuss them from Plato's point of view.
2. Give in outline Plato's scheme for educating the ideal ruler. Criticise it from the modern point of view.
3. Plato speaks of four stages of intelligence. Give these stages and the quality of mind that corresponds to each stage.
4. Give Plato's view of the nature of the soul. Estimate this view.
5. Discuss Plato's theory that, "Art is Imitation."
6. What features of Plato's educational theory could be applied to the improvement of our modern educational system?

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## Bachelor of Pedagogy.

## . Section A. II.

I. Explain fully what Descartes meant by "Cogito ergo sum."
2. Descartes maintained that there are certain "innate conceptions" which belong to the mind as it is in itself, while on the other hand our particular experiences come to us from without. Criticise this view.
3. Give Descartes' proof of the existence of God and estimate it.
4. "Matter, then, may be defined, a Permanent Possibility of Sensation" (Mill's Examination of Hamilton.) Discuss the theory contained in this statement.
5. "The utilitarian morality does recognize in human beings the power of sacrificing their own greatest good for the good of others. It only refuses to admit that the sacrifice is itself a good."

Give Mill's theory of Utilitarianism as exemplified in the above passage. Discuss the theory briefly, giving what you consider are valid objections against it from a philosophic point of view.
6. In Mill's use of the term, what is involved in "Justice"? Compare and contrast this with Plato's use of the same word.

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SECTION C. I.

I. Compare Plato's conception of the position of the philosopher in the commonwealth with that of Aristotle.
2. Compare Plato and Fouillée in their treatment of the place which art (including literature) has in education.
3. "In spite of some errors Comenius was a true prophet, and the world from his day to ours has been trying to convert his visions into realities". (Adamson's Pioneers of Modern Education.)

What are these visions of Comenius? Point out the chief errors.
4. "Self-activity together with the doctrines of continuity and connectedness form the heart of Froebel's system".

Explain these principles and show how Froebel would apply them.
5. Estimate the value of Froebel's Kindergarten as an educational method.

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## SECTION C. II.

I. "Education is a preparation for complete living".

Explain and criticise this theory of Spencer's.
2. Compare the views of Spencer and Fouillée as to the value of science in education.
3. According to Fouillée, what is the aim of national education? Upon what theory does he base education? Estimate the value of both aim and theory.
4. "In my opinion education is nothing but a totality of co-ordinated and reasoned-out suggestions".

Upon what psychological theory does Guyau found this opinion?
5. Why does Guyau couple heredity with education? How far is his position sound ?

PRACTICAL SCIENCE.

Queen's University Examinations : April, 1907.

## FACULTY OF PRACTICAL SCIENCE.

## Mathematics I.

## Algebra.

I. (a) State the index law, and from it explain the value of $x^{0}, x^{-1}, x^{\frac{2}{3}}$.
(b) Explain the value of o/o, $a / \mathrm{o}, \mathrm{o} / a, a / \infty 0$.
2. Factor $x^{4}-2 x^{3}-7 x^{2}+8 x+12$.
3. The illumination of an object varies inversely as the square of the distance from the source of light. Compare the illumination on the surface of the earth at a distance 93 from the sun with that on the surface of Mars at a distance 142 from the sun.
4. Draw the graphs of $y^{2}=4 x$ and $3 x+4 y=8$; and find from the equations the coordinates of their points of intersection.
5. Show that ${ }^{n} P_{r}=n!/(n-r)!=r!^{n} C_{r}$.
6. (a) Show that the expansion of $\left\{\mathrm{I}+\frac{\mathrm{I}}{n}\right\}^{n}$ as $n$ approaches $\infty$ is $1+1 / 1!+1 / 2!+1 / 3!+\ldots$, and find its value to 5 decimal places.
(b) Find $e^{x}$ as a series in powers of $x$.
7. (a) Find $m$ to 5 decimal places, where $\log _{10} N$ $=m \log _{e} N$.
(b) Find the Napierian logarithm of

$$
43(0.27)^{\frac{1}{3}} / \cos 68^{\circ} I_{3}^{\prime}
$$

8. State the principle of undetermined coefficients, and use it to
(a) expand $\sqrt{1-x+x^{2}-x^{3}+\cdots \ldots}$ to 4 terms in powers of $x$.
(b) separate $\mathrm{I} /(x-2)^{2}(x-1)$ into partial fractions.

Queen's University Examinations : April, 1907.

## FACULTY OF PRACTICAL SCIENCE.

## Mathematics I.

## Geometry.

I. Construct a triangle when two sides and the median to the third side are given. Examine the limits to the possibility of making the construction.
2. (a) $P$ is any point in the base BC of the iosceles $\triangle \mathrm{ABC}$. Show that $\mathrm{AB}^{2}-\mathrm{AP}^{2}=\mathrm{BP} \cdot \mathrm{PC}$. Examine also the case when $P$ is in the base produced. Employ the result in (a) to show that of all rectangles with a given perimeter the square has the greatest area.
3. An iosceles triangle has base 16 and altitude to the base 15. A circle of radius 4 touches the two sides of the triangle. How far is the centre of the circle from the vertex of the triangle.
4. (a) On a chord APB of a circle the point $P$ is taken such that AP.PB=a given square. Determine the side of the square by drawing a chord through $P$.
(b) Show how to find three-fifths of a given line segment.
5. (a) The bisectors of the vertical angle of a triangle divide the base into segments which are proportional to the conterminous sides. (b) On one side of a road a pole $121 / 2$ feet long stands on the top of a wall $7 \frac{1}{2}$ feet high. On the other side of the
road, at a point on the ground directly opposite, the pole and the wall subtend equal angles. How wide is the road?
6. Through any point there can be drawn one, and only one, straight line to meet two given noncomplanar lines.
7. (a) In a three-faced corner show that $\cos A=(\cos a-\cos b \cos c) / \sin b \sin c$.
(b) By employing the property of the reciprocal corner deduce from (a) an expression for any function of a face angle in terms of the dihedral angles.
8. (a) Show that in any parallelepiped $\Sigma d^{2}=\Sigma e^{2}$, where $d$ denotes a diagonal and $e$ an edge. (b) From (a) deduce an expression for the angle between an edge $c$ and the diagonal of a cuboid whose direction edges are $a, b, c$; and also for the angle between a diagonal and a face of a cube.
9. (a) Employ the prismoidal formula to find the volume of a zone of a sphere. (b) A sphere radius $5^{\prime \prime}$ is cut by a plane $3^{\prime \prime}$ from the centre. Find the volume of the segment removed.

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> FACULTY OF PRACTICAL SCIENCE.

## Mathematics I.

## Trigonometry.

I. (a) Define degree and radian and establish the relation between them.
(b) Two towns, A and B , are on the same meridian, and they are $79^{\circ} 6$ miles apart. A is $27^{\circ} 59^{\prime} 37^{\prime \prime} .14$ south latitude, and B is $29^{\circ} 8^{\prime} 22^{\prime \prime} \cdot 43$ south latitude. Find the earth's diameter ( $\pi=3 \cdot 14159$ ).
2. ABCD is a rectangle having $\mathrm{AB}=9, \mathrm{AD}=8$. $F$ is between $A$ and $B$ and twice as far from $B$ as from $A . E$ is the middle point of AD.' Find all the sides and angles of the $\triangle E F C$. (Use natural functions).
3. Prove $\cos (A-B)=\ldots$ and from the result deduce the other three addition formulae of the set.
4. (a) Develop the relation

$$
\tan \frac{A-B}{2}=\frac{a-b}{a+b} \cot \frac{C}{2} .
$$

(b) In $\triangle \mathrm{ABC}$ given $b=27.34, c=16 \cdot 28, A=37^{\circ}$ $29^{\prime} 16^{\prime \prime}$. Find $B$ and $C$, the area of the $\triangle$, and its circumradius, using logarithms throughout.
5. Develop the cosine formula, and show how it may be transformed into a formula, adapted to logarithmic calculation, for finding the angles of a triangle when its three sides are given. Show that the formula obtained is adapted to logarithms.
6. (a) Express $\cos 3 \theta$ in terms of $\cos \theta$.
(b) If $c=\frac{1+\cos \theta}{1-\cos \theta}$ prove log. $c=2$ log. $\cot \frac{\theta}{2}$.
7. Prove $\tan ^{-1} \frac{1}{2}+\tan ^{-1} \frac{1}{6}+\tan ^{-1} \frac{1}{8}=\frac{\pi}{4}$.

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## Astronomy.

I. Explain how the length of the earth's radius is found.
2. If the earth's radius is 3960 miles and the moon's horizontal parallax is $57^{\prime}$, find the moon's distance.
3. (a) What is meant by Venus's greatest elongation, and what is its value in degrees?
(b) Where and when would Venus be conspicuous at greatest elongation?

4: (a) Describe the zodiac and name its signs in order.
(b) Whereabouts in the zodiac is the sun on Dec. 2 Ist?
5. Explain the difference between a solar day and a mean day.
6. Give an idea of the cause and nature of the tides.
7. What is meant by the moon's annular equation?
8. Calculate the length of the umbra of the earth's shadow, and its diameter where the moon pierces it.

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## Mathematics II.

FIRST PAPER.
I. (a) Find the tangent of the angle between $2 x-3 y=1$ and $3 x+5^{y}=2$.
(b) Find the perpendicular distance from $(5,-3)$ to $x-3 y=2$, and the equation of the perpendicular line.
2. (a) Define the eccentricity of a conic.
(b) Derive the equation $y^{2}=4 a x$ for the parabola.
(c) Show by its graph that the conic is an ellipse when $e=3 / 4$.
(d) In the ellipse show that the distance between the foci is $2 a e$, where $a$ is the semi-axis major.
3. Differentiate, - (a) $\sqrt{(\mathrm{I}-x) /(\mathrm{I}+x)}$,
(b) $\cos ^{2} \theta \sin 2 \theta$,
(c) $e^{3 x} \sin ^{-1} 3 x$,
(d) $\log \sqrt{x-x^{2}}$
4. A line is drawn through $(4,5)$ to meet the coordinate axes in $P$ and $Q$. Find the minimum value of $O P+O Q$ and of $P Q, O$ being the origin.
5. (a) Find the equation of the parabola with the origin at the focus.
(b) Find the polar equation of the parabola with the pole at the focus.
(c) A particle moves along the parabola $y^{2}=4 x$ with uniform velocity ro. When it is at an end of the latus rectum, find (i) the velocity in the direction of the $x$-axis, (ii) the angular velocity about the focus.
6. By Maclaurin's theorem find the expansion in powers of $\theta$ of $(a) \sin \theta$, showing the law of the series, (b) $\tan \theta$, as far as $\theta^{3}$.

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## Mathematics II.

SECOND PAPER.

1. Find the equation of the tangent and of the normal to the parabola $y^{2}=4 x$ at an end point of the latus rectum.
2. $\rho_{1}$ and $\rho_{2}$ are radii of curvature at the end points of the axes of the ellipse $x^{2} / a^{2}+y^{2} / b^{2}=\mathrm{I}$. Find (a) $\rho_{1}$ and $\rho_{2}$ in terms of $a$ and $b$, (b) $a$ and $b$ in terms of $\rho_{1}$ and $\rho_{2}$.
3. Integrate (a) $\int_{0}^{\pi / 2} \sin ^{3} \theta d \theta, \quad$ (b) $\int_{-1}^{+1} \frac{d x}{4-x^{2}}, \quad$ given that $\log _{103}=0.47712$.

$$
\text { (c) } \int_{0}^{1} \frac{d x}{\sqrt{3-2 x-x^{2}}}, \quad \text { (d) } \int \frac{d x}{\sqrt{a^{2}+x^{2}}} \text {. }
$$

4. Find the general formula that applies to each of the following, and solve the problems, -
(a) To find the area between the curve $y\left(x^{2}+\right.$ $2 x+5)=1$ and the $x$-axis for the limits $x=-1$ and $x=+\mathrm{I}$.
(b) To find the volume of the ellipsoid with semiaxes $a, b, c$.
(c) To find the position of the centre of gravity of a uniform material circular arc subtending an angle $2 a$ at the centre.
(d) To find the moment of inertia of a uniform right-angled triangular plate about a perpendicular axis (i) through a non-right-angled vertex, (ii) through its centroid.

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## Spherical-Trigonometry and Astronomy.

I. (a) From a sphere 6 in. radius a conical sector is taken with vertex of the cone at the centre. If the semi vertical angle of the cone is $60^{\circ}$, find the volume of the sector.
(b) A sector of a circle of 6 in . radius has its angle $60^{\circ}$. Find the distance of its $c$. of $g$. from a radial boundary.
2. Find the volume of a parallelepiped, the direction edges being $6,8,10$, and the angles between them being $30^{\circ}, 60^{\circ}, 45^{\circ}$.
3. An equilateral triangle on the earth has each side $44^{\circ}$. Find its spherical excess, and thence its area.
4. From lat. $44^{\circ} \mathrm{I} 3^{\prime}$ N., long. $176^{\circ} 20^{\prime} \mathrm{W}$., we start N.W. $10^{\circ} \mathrm{N}$., and run a gt. circle line for 336 miles. What then should be our latitude and longitude?
5. At lat. $62^{\circ} \mathrm{N}$. we start a line at $25^{\prime}$ north of west. How far must we go before coming to the parallel of $62^{\circ}$ again, and how far will we depart from it ?
6. At lat. $46^{\circ} 20^{\prime} \mathrm{N}$, we wish to find our meridian on April roth from an observation on $\beta$ Cephei at greatest elongation. We take from the almanac $a=2 \mathrm{I}^{h} 27^{m}, \delta=70^{\circ} 2^{\prime} \mathrm{N}$., sid. time at noon $=\mathrm{I}^{h} \mathrm{I}^{m} 2^{m} 2^{s}$. Find the approximate time of observation, and the azimuth of the instrument.

Queen's University Examinations: April, 1907.
FACULTY OF PRACTICAL SCIENCE.

## Physics I.

## A. Dynamics and Properties of Matter.

i. Describe a "McLeod Guage" for the measurement of small gas pressures, and derive the formula for its use.
2. An arc lamp (mass 30 lbs .) is hung from a wire stretched across a street, between poles 40 feet apart. A rope from the lamp passes over a pulley at the middle of the wire and thence parallel to the wire to a second pulley on the pole and finally to a cleat near the ground. If the wire sag 2 feet from the horizontal when the lamp is in place, find the tensions in the two halves of the wire.
3. A small reservoir is fed from the city water
 mains by a pipe, A (1/2 inch internal diameter) passing through the bottom of the tank. The inflow is controlled by a flate plate with with washer, carried by a horizontal bar, B, that is hinged at $\mathrm{C}, 2$ inches from the centre of the inflow pipe. This is pressed against A by the buoyancy of a hollow copper sphere (mass 4 ounces, radius 3 inches) attached to the bar (as per diagram) by a wire 9 inches long. If the water pressure be due to a head of 100 feet, how far from the hinge must the ball be attached if it is to stop the inflow when the ball is half immersed?
4. What is the greatest depth allowable (factor of safety 2 ) in a vertical cylindrical tank, 20 feet diameter, built of $1 / 2$ inch iron of ultimate strength $40,000 \mathrm{lbs}$. per square inch? Rivetted joint $70 \%$ strength of material.
5. An athlete in throwing the hammer swings it in a circle of 7 feet radius in a plane at $35^{\circ}$ to the horizontal. He makes the last complete circle in $0 \cdot 8$ second. How far does he throw it? (Neglect height of projection above ground.)

$$
\sin 35^{\circ}=0.573 . \quad \cos 35^{\circ}=0.819 . \quad \sin 70^{\circ}=0.939
$$

## Also any two of the following:

6. In estimating the H.P. of a waterfall the rule is "One H.P. for each 12 cubic feet of water per second "for each foot of head". What efficiency does this assume in the motor?
7. The lock gates at Sault Ste Marie are worked by a hydraulic engine ( 15 inches diameter of piston, 96 inches stroke,) supplied by a hydraulic accumulator (ram 21 inches diameter, mass 20.7 tons). What H.P. is developed at one revolution per minute?
8. Find the work done by the brakes in bringing a 200 ton train to rest from 40 miles an hour, in 600 yards. Axle friction 15 lbs . per ton.
9. In the "Brown Speed Guage", a narrow Utube of mercury is rotated about a vertical axis coincident with one of the arms. If the arms be i centimetre apart, what r.p.m. will correspond to a depression of 5 centimetres in the central tube? Density of mercury 13.6 .

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## Physics I.

B. Electricity, Magnetism, Sound, Heat, and Light.
I. Write notes on :-
(a) The electrostatic unit of quantity.
(b) The electrostatic unit of current.
(c) The potential difference of two points.
2. (a) Describe an "Accumulator" or "Secondary Cell. "
(b) What are its most noteworthy characteristics?
3. Explain briefly the idea of "molecular magnets" and give instances of the explanation of magnetic phenomena from this point of view.
4. Explain the principle and use of the small induction coil in modern telephones.
5. An ampere meter of resistance ( 0.001 ohms) reads to 15 amperes. It is desired to use it with a shunt so that its maximum reading shall be 150 amperes. Find the length of copper wire to be used for a shunt if cross section of wire is 5 sq . mm ., and specific resistance of copper is $1{ }^{1} 6 \times 10^{-6}$.
6. (a) What is meant by resonance?
(b) What mechanical explanation of resonance can you offer?
7. (a) A bar of iron 20 ft . long at $0^{\circ} \mathrm{C}$ was heated until the length was $20^{\circ} 1 \mathrm{ft}$. To what temperature was it heated? The coefficient of linear expansion of iron is 000012 .
(b) What is the relation between the coefficients of linear and cubical expansion?
8. (a) 1000 cc . of air at $100^{\circ} \mathrm{C}$ would occupy what volume if heated to $300^{\circ} \mathrm{C}$, the pressure remaining the same?
(b) Define absolute zero of temperature.
9. How much steam at $100^{\circ}$ must be passed into 200 grams of ice cold water in order to raise it to the boiling point?
10. (a) An object 2 inches long is placed 18 inches from a double convex lens whose focal length is 12 inches. Where and how large is the image?
(b) Draw the diagram locating the image.
ir. Define index of refraction, critical angle, dispersion, spectrum, plane-polarized light, double refraction. Explain the absorption spectum.

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## Physics II.

[Any 10 questions].

1. A bicyclist weighing i50 lbs. "loops a loop" of 15 feet radius. If his c. of $m$. is 3 feet above the track and his velocity just sufficient to carry him around the loop, find his pressure on the wheel as he starts to ascend.
2. If the motion of a body is simple harmonic, write expressions for its velocity and acceleration in terms of the time and in terms of its displacement. Also express its greatest velocity and greatest acceleration in terms of its amplitude and period.
3. A railway car weighing 6 tons runs into a spring buffer with speed of 6 inches per second and is stopped in 4 inches. Find the time taken and the force which would compress the springs one inch. [Assume motion simple harmonic.]
4. If the connecting rod of an engine is 3 feet long, the crank arm I foot and the crank $60^{\circ}$ from the line of dead centres, find the velocity of the piston and its distance from the end of its stroke.
5. State the rule for addition of vectors and apply it to find (a) the direction in which a projectile is moving at any time, initial velocity $u$ at elevation $\theta$, (b) the tensions in the parts of a cable which carries three loads at given points.
6. A beam 9 feet long is fixed at one end and carries loads of 200, 150 , and 300 lbs . at distances of 3,6 , and 9 feet from the fixed end. Draw a curve to show the bending moment at each point of the beam.
7. Describe the methods of finding the moment of inertia of (a) an irregular section graphically, (b) an irregular body experimentally.
8. A fly wheel hangs from a bar inside the rim, 5 feet from the axis and oscillates with a period of 3.6 seconds, find its radius of gyration.
9. A fly wheel has radius of 4 feet and its moment of inertia is 8000 engineering units. Find the work required to increase its speed from 90 to 100 R.P.M. How long will it take to do this by an effective pull of 160 lbs . on the belt?

1o. Explain what is meant by a coefficient of elasticity, and describe a method of measuring the rigidity of a metal proving the necessary equation.
ir. Prove that the moment required to bend a beam to a given curvature is proportional to the moment of inertia of its cross section about the neutral axis.
12. Explain what is meant by a "reversible process" in thermodynamics and show that a reversible engine is more efficient than any other working between the same temperatures.

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## Physics III.

1. Describe, with diagram, how you determined the distribution of magnetism along a bar magnet.
2. A charged gold leaf electroscope will discharge through a piece of marble or "red fibre," yet these are commonly used as insulators in commercial work. Explain this.
3. If a bundle of steel wires be magnetized after they are bound together the resulting magnet is not so strong as when the wires are separately magnetized before being bound in the bundle. What is the explanation?
4. What is meant by the reversibility of a voltaic cell?
5. Explain three different methods of control used on current measuring instruments.
6. (a) What is a Wheatstone's Bridge or Net? Establish the relations obtaining at balance.
7. It is desired to measure a large current with a millivoltmeter and shunt. If the millivoltmeter have a resistance of 0.5 ohm what must be the resistance of the shunt if each millvolt division is to correspond to 3 amperes?
8. A building is lit by twenty arc lamps, each taking 10 amperes at 60 volts. If the lamps be in series and the resistance of the leads be 5 ohms, what must be the horse-power of the engine to drive the dynamo (assumed to be of $80 \%$ efficiency)?

Queen's University Examinations : April, 1907.

## Physical Chemistry II.

faculty of practical science (COURSES b, D, G.)

## [No more than eight questions to be attempted.]

1. What is meant by $R$ in the equation $p v=R T$ ? Calculate its value in any case, making clear what units you employ.
2. Prove that the specific heat of the molecular weight of a gas at constant pressure is two calories greater than the specific heat at constant volume.
3. Discuss osmotic pressure.
4. How is either the relative or absolute velocity of ions determined?
5. Show clearly that you understand what is meant by isohydric solutions.
6. Discuss any cell in which the electrical energy is derived wholly from external heat energy or wholly without external heat energy.
7. Show the kind of experiment by which the latent heat of the lead accumulator has been determined.
8. Prove that in the ordinary Daniell cell the $E . M . F$. depends almost entirely upon the electrolytic solution pressure of the electrodes.
9. Describe the capillary electrometer showing the principle upon which it acts.
10. Discuss oxidation and reduction cells.
11. Discuss the Edison storage battery, its advantages and disadvantages.
12. How may the quantity of silver ions in a solution of the double cyanide of potassim and silver be determined by a measurement of E.M.F. ?
13. A aqueous solution of copper sulphate is electrolysed until 0.2955 gramme of copper is deposited using copper electrodes. The solution at the cathode, before the passage of the current gave 2.2762 grammes of copper and after the passage 2.0650 grammes. Find the transport numbers of the ions.

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## Industrial Chemistry.

[Not more than ten questions to be attempted.]
i. Describe the method of production of potassium nitrade for gunpowder. What other nitrates are used in explosives, and how do they compare with potassium nitrate?
2. What materials are used in the manufacture of Portland cement and what process do they go through? What ingredients are injurious?
3. Discuss the rancidity of oils and fats or the boiling of oils.
4. Discuss some method of making caustic soda from salt, giving its advantages and disadvantages.
5. Describe industrial modifications of the beaker.
6. Describe any industrial method of obtaining sulphur.
7. Describe a plant for the manufacture of illuminating gas or discuss the distillation of coal tar.

8, Write a short account of the technology of cyanides or nitric acid, or potash, or carbon tetra chloride, or permanganates, or bromine.
9. Discuss the manufacture, properties and adulterants of yellow or green pigments.
10. Describe alcohol production or discuss the denaturing of alcohol.
ir. Compare mechanical pulp and chemical pulp, or describe any process for making themical puly.
12. Write a short essay on any subject of chemical industry which you have not discussed under the other questions.

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## Systematic Mineralogy.

## Mineralogy $I I$.

1. Give with Naumann's symbols all the hemihedral forms produced by parallel-faced hemihedrism in the isometric system.
2. Describe with an example in each case, the principal twinning laws in the monoclinic system, and triclinic system.
3. Give an account of inclusions in minerals.
4. Show the importance of hardness in physical, descriptive and determinative mineralogy.
5. By means of the optical microscope how would you detect the following : (a) an amorphous mineral, (b) an isometric mineral, (c) a tetragonal crystal, (d) an orthorhombic crystal, (e) a monoclinic crystal, $(f)$ a triclinic crystal ?
6. Explain (1) the construction and (2) use of (a) the nicol prism, $(b)$ the quarter undulation plate, ( $c$ ) the gypsum plate.

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## FACULTY OF PRACTICAL SCIENCE.

## Optical Mineralogy.

Mineralogy III.

1. Show that white light consists of ether waves of different lengths.
2. Show of what use a knowledge of the index of refraction is in the study of mineralogy.
3. What is meant by positive and negative isodiametric minerals? How is this character determined?
4. Explain what is meant by (a) parallel extinction, (b) inclined extinction, when examining rock sections with the polarizing microscope.
5. Sketch a figure showing the three pinacoids of the orthorhombic system. Assume three oriented sections cut parallel to these faces, then describe the phenomena in (a) parallel polarized light, (b) in convergent polarized light when these sections are examined by the polarizing microscope.

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## FACULTY OF PRACTICAL SCIENCE.

## Mineralogy IV.

Descriptive and Determinative Mineralogy.

1. Describe two ores of each of the following metals :
(a) Copper, (b) silver, (c) zinc.
2. Give Dana's division of the minerals into classes.
3. Give the subdivisions of any one of the important classes.
4. Give the optical properties of three important rock-forming minerals.
5. Give the occurrence and differentia of any three rock-forming minerals not mentioned in answer to question four.
6. Give the pyrognostic characters of any three ores not mentioned in question one.
7. Determine the numbered specimens by means of the blowpipe and the lettered specimens by field tests.

Queen's University Examinations : April, 1907.

## Mining I.

## Be concise.

I. State what you think are the main factors in the origin of ore deposits and surface enrichments.
2. What are the chief factors in prospecting for (a) coal, (b) placer, (c) lode deposits ? How would you proceed to investigate a discovery in each case ?
3. A hillside slopes evenly at $30^{\circ}$ southwards; a coal seam dips at $45^{\circ}$ degrees due westwards across it ; plot, as well as you can, the course of the outcrop, explaining how you could do it exactly.
4. Describe and illustrate the opening up of a prospect by tunnel or shaft, giving dimensions, equipment and probable cost for 1000 lineal feet of work done on the ore body.
5. Describe the action, speed, dimensions and limitations of the long distance percussions or churn drill. What advantages has it over the diamond drill?
6. Show by sketches and description how you would excavate the heading of a developement shaft or tunnel, by either hand or power drill and high explosives.
7. How would you stope out any one of the following? Show timbering used :
(a) A narrow high grade ore body, nearly vertical.
(b) A wide low grade ore body at $45^{\circ}$ pitch.
8. What are the vital differences between coal and metal mining? How could you mine a highly inclined seam of firm coal?
9. Define: ore chute ; safety explosive ; adit; creep deadwork; gangway ; mill-hole ; gad ; moil ; reaming ; float.

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## Mining II.

Be concise.
I. State briefly the natural conditions and the limitations of (a) placer, (b) hydraulic, (c) gold dredge mining.
2. What devices other than timbers are used to support excavations? What preservatives are used for timbers? How would you support a weak and scaly hanging wall in stopes io feet wide?
3. Describe carefully the double aerial gravity tramway, giving capacity, sizes, operation and advantages of this system over other gravity systems.
4. What forms of hoisting gear attempt to give a constant load on the engines? Describe the principles of two of these systems.
5. Describe briefly, but clearly, two forms of underground transportation giving as much data as possible.
6. A mine pump is wanted to lift $1,440,000$ gallons of water per day from the 500 foot level. Describe, with dimensions, some form of pump to do this work ; also compute the H.P. required.
7. State in detail the methods of ventilating coal mines ; also the reasons for ventilation, and methods of determining the volume of air used.
8. What would you think are the principal factors to be considered ( $a$ ) when examining a prospect, (b) when examining a developed mine?
9. Write an account of the handling of one of the following ores between the stope and reduction or market :
(a) A rich ore which occurs in narrow streaks along with a wide body of lower grade ore.
(b) A low grade smelting ore, in large masses, mixed with other ore too low grade for shipment.
(c) A crushed and slaty hard coal.

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## Ore Dressing.

I. To what class of work (wet or dry crushing, size of material handled, size of product and character of ore) are the following machines particularly adapted? (a) Gates conical crusher, (b) Blake jaw crusher, (c) Dodge jaw crusher, (d) Krupp ball mill, $(e)$ Emery or buhrstone mill, ( $f$ ) Tube mill, (g) Huntington mill, ( $h$ ) Gravity stamp mill, (i) Steam stamp mill, ( $j$ ) Cyclone pulverizer?
2. Sketch a modern set of rolls showing ( $a$ ) how the wearing parts may be replaced, (b) how the rolls may be adjusted for crushing coarse or fine, (c) what provision there may be for allowing a piece of steel from a drill etc., to pass through the rolls without breaking the roll shaft.

What is the minimum diameter of a set of rolls that will crush $3^{\prime \prime}$ lump down to $3 / 4^{\prime \prime}$, when the angle of friction $\theta=16^{\circ} \cos . \theta=.96$.
3. What are the comparative advantages of the following material used: $(a)$ in the construction of a trommel, (b) for the screen of a stamp battery? $(A)$ Round hole punched metal. ( $B$ ) Oblong hole punched metal. ( $C$ ) Copper or brass wire cloth. $(D)$ Iron or steel wire cloth?

What are the diffiiculties met with in designing a single cylindrical trommel for grading into three or more sizes?
4. Why is it possible to concentrate material, on the bed of a jig, that has been previously subjected to hydraulic classification? Why is slow suction bene-
ficial in the case of jigging free copper ores? How would the concentrates and tailings be withdrawn from a Hartz jig when jigging (a) coarse galena and gangue, all over one inch, (b) mixed galena and gangue from 20 mesh to $1 / 2$ inch, (c) galena and gangue from 20 to 40 mesh? What would be the mesh of the screen of the bed in each case ?
5. Describe some form of concentrating table particularly adapted to treat slimes or very fine sands.
6. Sketch and describe the Hooper pneumatic jig and state under what conditions and for what class of work this table should be used.
7. Describe the Elmore oil process of concentration and state what class of minerals and ores would be perticularly amendable to this treatment.

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## Metallurgy 1.

I. Define : calorfic power, heat of formation, thermal equation, exothermic reaction. What is the heat of combustion of one cubic meter of acetylene $\left(\mathrm{C}_{2} \mathrm{H}_{2}\right)$ under standard conditions? Given that the heat of formation of $\mathrm{C}_{2} \mathrm{H}_{2}=-54,750$, $\mathrm{CO}_{2}=97,000, \mathrm{H}_{2} \mathrm{O}=58,000$, and that the molecular weight in kilograms of any gas under standard conditions will have a volume of 22.22 cubic meters.
2. Define : calorific intensity, pyrometry. Why is the theoretical calorfic intensity of combustion not obtained in practice?
3. Sketch and describe the operation of an Otto Hoffman by-product coke oven and show in what ways it is superior to the beehive.
4. Sketch and describe one of the following gas producers :-Monde, Dellwick-Fleischer, Loomis Pettibone.
5. For what work are the following furnaces adapted, and what fuel would be employed in operating them? (a) Circular blast furnace 90 feet high. (b) Siemens regenerative furnace. (c) Ore hearth.
6. How are the mechanical properties of pig iron influenced by the condition of the carbon it contains? How is this condition of the carbon influenced by Si , $\mathrm{Mn}, \mathrm{S}$ ? What is the effect of P on cast iron? What is malleable cast iron and how is it manufactured?
7. Define : pig iron, steel, hardening, annealing, tempering. How may these three latter operations be explained by the relation of the carbon to the iron ?

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## Metallurgy II.

I. Describe three methods employed in practice for precipitating gold and silver from cyanide solutions.
2. Name the various metallurgical processes employed for recovering silver from its ores, and state for what class of work each is particularly adapted.
3. Describe the operation of converting copper matte into blister copper. What are the objections to treating very high or very low grade matte by this process?
4. Describe some one method of desilverising lead, and compare it with the other methods employed in practice.
5. What is the effect of $S$ on cast iron and steel? Given ores high is S (say $3 \%$ ) and impure coke containing S, how may that impurity be removed so that a good pig iron and a good steel may be obtained ?
6. What would be the chemical composition of the pig-iron required for the following purposes :
(a) Making steel in a basic Bessemer converter.
(b) Making steel in a basic open-hearth.
(c) Making steel in an acid open-hearth.
(d) Making malleable cast iron.
(e) Casting small intricate ornamental designs.
$(f)$ Casting rolls with chilled faces.
7. From the following ores it is required to make a pig-iron containing $\mathrm{Fe} .93 \%$, $\mathrm{C} 4 \%$, $\mathrm{Si} 2 \%$, $\mathrm{P} .093 \%$ :
(a) $\mathrm{Fe} .60, \mathrm{SiO}_{2}$ 10, $\mathrm{Al}_{2} \mathrm{O}_{3} 5, \mathrm{P} . \mathrm{I}$.
(b) Fe. $40, \mathrm{SiO}_{2} 20, \mathrm{Al}_{2} \mathrm{O}_{3} 5, \mathrm{P}-$

One ton of coke required for one ton of pig produced. The coke contains $\mathrm{Fe} .1 \%, \mathrm{SiO}_{2} \cdot 5 \%, \mathrm{Al}_{2} \mathrm{O}_{3} 5 \%$. How much dolomite containing $50 \%$ of available basis will be required to make a slag in which the ratio of the acids to the basis is I to I ?
8. Describe the operation of making wrought iron from pig.

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## Metallurgy III.

## Etetro-Metallurgy.

1. Give a brief description of some metallurgical operation in which the electric current is employed, (a) using the electrolitic action only, (b) using the thermal effect only, (c) using both the electrolitic and the thermal action.
2. What are the factors that control the amparage and voltage employed in refining copper? How are the impurities (Au., Ag., S., Fe., etc.), present in the anode, prevented from entering the cathode?
3. How many pounds of the following metals will be deposited per horse power year, assuming $100 \%$ efficiency? Copper from $\mathrm{Cu}_{2} \mathrm{Cl}_{2}$. Zinc from Zn . $\mathrm{SO}_{4}$. Given heat of formation of $\mathrm{Cu}_{2} \mathrm{Cl}_{2}=65.7$, and that the critical voltage required to decompose $\mathrm{Zn} . \mathrm{SO}_{4}=2.25$; also 96540 conlombs of electricity will deposit one chemical equivolent weight in grams. At $. \mathrm{Wt} \mathrm{Zn} .=65, \mathrm{Cu}=63.5$. One joule=. $\mathrm{coo2} 4 \mathrm{cal}$. One pound $=454$ grams.
4. Describe some one method of making pig-iron employing the electric current.

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> FACULTY OF PRACTICAL SCIENCE. Thermodynamies. I.

Value

1. How much heat must be supplied to raise the temperature of 10 lbs . of air in the atmosphere from - $10^{\circ} \mathrm{F}$. to $60^{\circ} \mathrm{F}$ ? By how much will the internal energy be increased? What becomes of the remainder of the heat supplied?
2. When coal is burned in a furnace the average amount of air supplied is 18 lbs . per 1 b . of coal, and the average temperature of the escaping gases is $450^{\circ} \mathrm{F}$. Taking the thermal value of the fuel to be 14,000 B.T.U., and the specific heat of the escaping gases to be .24 , determine the percentage of the heat which is carried away by the gases.
3. An air motor takes in air at $60^{\circ} \mathrm{F}$. and 75 lbs. pressure, and expands it to 6 lbs . pressure. Determine the work done per lb . of air and the theoretic amount of air used per horse-power per hour.
4. The power developed by an engine running at $260 \mathrm{r} . \mathrm{p} . \mathrm{m}$. is measured by a brake consisting of a wheel $6^{\prime}$ in diameter which is encompassed by a band made of $\mathrm{I}^{\prime \prime}$ rope. The tension on one end of the band is 700 lbs . and on the other end roo lbs. Calculate the brake horse-power developed.
5. A boiler is supplied with water at $200^{\circ} \mathrm{F}$. and it generates steam at 150 lbs . pressure, dryness .98. Determine (a) the total heat supplied per 1 b . of steam, $(b)$ the increase of internal energy, and (c) the factor of evaporation.

## II.

6. Determine the horse-power of a $12^{\prime \prime} \times 14^{\prime \prime}$ non-condensing engine using steam at 80 lbs . with cut-off at $1 / 3$ stroke and running at 250 r.p.m. Assume .8 for the diagram factor.
7. A simple slide valve is to cut off at $\frac{3}{10}$ stroke and release at $\frac{9}{10}$ stroke. On the head end the lead is to be $\frac{1}{16}$ " and the maximum port opening is to be $\frac{5}{16}{ }^{\prime \prime}$. Determine ( $a$ ) the travel, (b) the angle of advance, (c) the laps, inside and outside for both ends, and (d) the lead and maximum port opening for the crank end. The ratio of connecting rod to crank is 5 .
8. Two boilers, one of which carries a steam pressure of 30 lbs . and contains 240 c . feet of water, and the other carries a steam pressure of 8 olbs . and contains 300 c . feet of water, are connected together through the medium of a steam pipe. Assuming that no heat is taken in or lost by either boiler, determine quantitatively what will happen. Neglect the initial quantity of steam in each boiler.
9. Describe the principle and action of the automatic cut-off governor and point out its advantages compared with the throttling governor.
10. An engine rejects steam, dryness .9, to a condenser at 2 lbs . pressure absolute. This steam is condensed by circulating water of which the initial temperature is $50^{\circ} \mathrm{F}$., and the final temperature is $110^{\circ} \mathrm{F}$. Determine the amount of water required per lb . of steam.

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## Thermodynamics III.

I. Steam at 80 lbs . pressure is passed through a throttling calorimeter. If the pressure after throttling is that of the atmosphere and the temperature is 220 degrees, determine the dryness of the steam before throttling.
2. An engine operates with steam at 150 lbs . pressure and superheated 200 degrees. If the vacuum in the condenser is $28^{\prime \prime}$, determine ( $a$ ) the thermodynamic efficiency, and (b) the steam used per horse-power per hour, taking into account the fact that heat is taken in at different temperatures.
3. Draw to scale the entropy-temperature diagram from the given indicator diagram which was taken from an $181 / 2^{\prime \prime} \times 30^{\prime \prime}$ engine running at I 30 R.P.M. and using 5550 lbs . of steam per hour. The clearance is $71 / 2 \%$.
4. An engine under test indicates an average of 280 H . P., and in a hour consumes $3,750 \mathrm{lbs}$. of steam at 108 lbs . pressure and dryness .98 with a condenser pressure of 1.5 lbs . absolute. Calculate ( $a$ ) the weight of dry steam used per horse-power per hour, (b) the thermodynamic efficiency, and (c) Willans' efficiency.
5. A $122^{\prime \prime} \mathrm{xi} 2^{\prime \prime}$ engine, running at 300 R.P.M., cuts off at $1 / 4$ stroke and takes steam at 100 lbs . absolute pressure with exhaust pressure at 16 lbs . absolute. If the clearance is $10 \%$ of the piston
displacement and the compression is carried to the initial pressure, calculate (a) the I.H.P., and (b) the probable steam consumption per horsepower per hour, allowing $35 \%$ for cylinder condensation.
6. An injector is required to deliver 7200 lbs . of water per hour at 180 degrees when operating with a steam pressure of loo lbs. If the water flows to the injector under a head of $8^{\prime}$, and at a temperature of 100 degrees, determine the areas of the injector orifices.
7. In a Meyer expansion valve the travel of the main and expansion valves are $4^{\prime \prime}$ and $3^{\prime \prime}$ respectively, the outside lap of the main value is $3 / 4^{\prime \prime}$, inside lap $5 / 8^{\prime \prime}$, and the expansion valve must be displaced $I T / 4^{\prime \prime}$ to cover the port of the main valve. If the ratio of connecting rod to crank is 4, determine the points of admission, cut-off, exhaust, and compression.
8. Steam at 150 lbs . pressure and superheated 200 degrees is to be expanded adiabatically in three nozzles in series to an absolute pressure of i lb., starting from rest at the entrance to each nozzle. Determine $(a)$ the pressures after passing through the first and the second nozzles so that the velocities after passing through each of the nozzles will be equal, and (b) the magnitude of this velocity.

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## General Engineering 1.

$\qquad$
Marks.

1. What is meant by the 'Eleven rule' in the mixing of concrete? Apply the rule to the proportions, $1-2-5$.
2. Find the quantity of brick, sand and cement required for a brick wall 200 feet long, 20 feet high and $163 / 4$ inches thick, using the following data:--Size of brick, $81 / 4 \times 4 \times 21 / 4$ inches, mortar joints $1 / 4$ inch thick, voids in sand, $40 \%$, just filled with cement, I barrel of cement contains 3.8 cubic feet.
3. Describe briefly the typical modern method of manufacturing Portland cement. (Not more than 500 words required).

4, What is common lime mortar? Describe fully the process of making it.
5. Enumerate the advantages of cast iron, wrought iron and mild steel, (a) for columns, $(b)$ for beams, $(c)$ for tension members.
6. Investigate the safety of a steel I-beam 18 inches deep, weighing 70 lbs. per foot, sectional area 20.5 sq. inches, width of flange 6.25 inches, moment of inertia 900, uniform load 930 lbs . per lineal foot, two concentrated loads of 4000 lbs . each, one 4 feet, the other 8 feet from the left hand support, allowable tension and compression 12000 lbs . per sq. inch, shear 10000 lbs . per sq. inch. Length of beam 20 feet.
7. Discuss the safety of a steel cylindrical boiler shell 36 inches in diameter, $1 / 4$ inch thick, with longitudinal single riveted lap joints, $1 / 2$ inch rivets, pitch $21 / 2$ inches, internal pressure, ioo lbs. per sq: inch.
8. Draw the stress diagram for the truss shown in figure $\mathrm{I},(a)$ when the joints $\mathrm{I}, 2,3,4,5$, are loaded with 1000 lbs . each, (b) when the joints 1, 2, 3, are loaded with 1000 lbs . each, and 4, 5, are unloaded. Tabulate all the stresses.
9. A plate girder 32 feet long carries loads of 1000, $1500,2000,2500$ and 3000 lbs . placed 5 , 10, 15,20 and 25 feet respectively from the left hand support. Find graphically the reactions at both ends, the maximum bending moment, the maximum shear, the bending moment and shear at the centre and the point of minimum shear, and tabulate the results.
10. Find the moment of inertia about an axis through the centre of gravity perpendicular to the web, of a cast iron section of the following dimensions:-Upper flange $2 \times 8$ inches, lower flange $21 / 2 \times 12$ inches, web $2 \times 12$ inches.

Note-100 marks constitute a full paper.

Queen's University Examinations : April, 1907.

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## General Engineering II.

1. How much power may be transmitted by a hollow steel shaft $16^{\prime \prime}$ outside diameter, $8^{\prime \prime}$ inside, $48^{\prime}$ long, revolving at 120 revolutions per minute, shearing stress not to exceed 9,000 lbs. per sq. inch? $E=30,000,000$.
2. What would be the diameter of a solid steel shaft to transmit the same power at the same speed, and through what angle would the shaft be twisted?
3. An $18^{\prime \prime}$ rolled I-beam weighing 70 lbs . per foot, moment of inertia 920, spans continuously two openings of 30 feet and 20 feet. Find the safe load uniformly distributed, which the girder will bear, allowing a flange stress of not more than $12,000 \mathrm{lbs}$. per sq. inch.
4. Derive Euler's formula for long columns with hinged ends, and find the maximum load for a solid steel column, circular in section, 3 inches diameter and 20 feet long. $\mathrm{E}=30,000,000$; factor of safety, 10.
5. Find the safe uniform load for a reinforced concrete beam 8 inches wide, 12 inches deep, with 1 steel rod 1 inch square, placed 1 inch above the bottom of beam, assuming all data required.
6. Give a brief discussion of the principles involved in the design of a masonry dam.
7. A plate girder of 40 feet span, 36 inches deep, bears a uniform load of 400 lbs . per sq. inch ; four wheel loads of $8,000,20,000,20,000$, and $20,000 \mathrm{lbs}$., spaced 8 feet apart, move over the girder from right to left. Find the maximum shear and B.M. at a point 8 feet from the left support, and also the maximum flange stresses at this point.
8. Discuss the stability of a retaining wall of first-class masonry weighing 160 lbs . per cubic foot, 24 feet high, 3 feet wide on top, 7 feet wide on base with a batter of 1 in 16 on the face, when holding up earth weighing ioo lbs. per cubic foot, having a natural slope of $45^{\circ}$, the wall being surcharged so that the earth slopes up $30^{\circ}$ from the back edge of wall.
9. Draw the linear arch for a two-hinged, plate girder arch-rib of 100 feet span and 40 feet rise, of constant section and loaded with a uniform load.

Note-100 marks constitute a full paper.

Queen's University Examinations : April, 1907.

## FACULTY OF PRACTICAL SCIENCE.

## Electrical Engineering I.

I. The machinery in a certain factory is driven by 220 -volt motors, and the average power taken is $70 \mathrm{H} . \mathrm{P}$. The distance between the generating plant and the center of distribution of power for the motors is $800^{\prime}$. If the transmission line is composed of $4 / 0$ wire of which the resistance is - 05 ohm per 1000', determine ( $a$ ) the voltage at the generator, assuming 220 volts at the point of distribution, and (b) the watts lost in the line.
2. Assuming that $70 \%$ of the electrical input is usefully expended, what current will be required by a 500 -volt railway motor in driving a 6 -ton car up a grade of $8 \%$ at a speed of 8 miles per hour. Assume the frictional resistance to be ${ }^{1} 5 \mathrm{lbs}$. per ton.
3. A 10 H.P., 220-volt, D.C. motor takes i• 8 amperes in its armature and $1 \cdot 5$ amperes in its field winding when running with no load. If the resistance of the armature is 35 ohm, determine (a) its efficiency at full load, (b) its efficiency at one-half load, and (c) its speed at one-half load as a fraction of its speed at full load assuming the flux per pole to remain constant.
4. What resistance would be required in series with the armature of the motor specified in the preceding question to reduce the speed $25 \%$ ? What would you do to increase the speed?
5. Two E.M.Fs. differ in phase by $60^{\circ}$, and the resultant is 1200 volts. If one is 1000 volts, determine the magnitude and phase relation of the second one to the resultant.
6. A system consists of a generator, a step-up transformer having 300 primary and 4500 secondary turns, a transmission line, and a stepdown transformer which delivers power at 390 volts, the ratio of transformation being 75 . Allowing a loss of $5 \%$ in the generator, $2 \%$ in the transformer, $10 \%$ in the line, calculate the efficiency of the system.
7. Determine the diameter of the copper wires required to deliver 5000 H.P. at 20000 volts and with a power factor of $\cdot 9$, over a distance of 20 miles with an efficiency of $85 \%$, using the 3 phase system.
8. In an 8-pole dynamo the flux density in the air-gap is 7000 gausses, the area of one pole face is 715 sq . cms. and the number of conductors per armature circuit is 400 . What speed is required to give an E.M.F. of 500 volts?
9. How would you change (a) the direction of rotation of a D.C. motor, (b) the direction of rotation of a 2 -phase motor, (c) the direction of the E.M.F. in the case of a D.C. generator?
10. One magnetic circuit of a generator is made up as follows: Cast iron, length $8^{\prime \prime}$, section 30 sq. ins. ; sheet steel, length $7^{\prime \prime}$, section 18 sq. ins. ; sheet steel, length $\mathrm{I}^{\prime \prime}$, section io sq. ins. ; air, $1 / 8^{\prime \prime}$, section 8 sq. ins. Calculate the ampereturns required to induce a flux of $98 \times 10^{4}$ lines.

Note-100 marks constitutes a full paper.

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## Electrical Engineering II.

Value.
I. Seven cars a mile apart take 15 amperes each from a trolley line 6 miles long. Find the voltage between the trolley wire and rail at each car, assuming the resistance of the rail to be 4 ohm per mile, and the resistance of trolley wire to be $\cdot 25$ ohm per mile.
2. Three parallel wires are each $I^{\prime}$ from the other two. A current of 100 amperes flows in one direction in each of two of these wires, and 200 amperes flows in the opposite direction in the third. Determine in magnitude and direction the force exerted on each wire per foot of length.
3. A transformer has a magnetic circuit of which the mean length is $35^{\prime \prime}$ and section 36 sq. in. One coil has 175 tnrns and the other has 35 turns. If the permeability of the iron is 1250 , determine the inductance of each coil and their mutual inductance.
4. A current of 50 amperes is passed through the armature of a machine when at rest, and the voltage between the brushes is found by measurement to be 4 volts. If after it has been running for some time the voltage drop with the same current is 5 volts, how many degrees has the temperature changed, the temperature in the first case being $20^{\circ} \mathrm{C}_{4}$ ?
5. Two generators in parallel supply a current of 25 amperes to a line. The current in the two armatures are respectively 10 degrees ahead and 5 degrees behind the line current. Determine the magnitude of the current in each armature.
6. An iron ring with a mean length of 20 cms . and a cross section of 10 sq. cms., has a magnetising coil of 100 turns. If the permeability of the iron is 1200 , what quantity of electricity will flow around a search coil with 5 turns and 1500 ohms resistance when a current of 5 amperes is reversed in the magnetising coil ?
7. An E.M.F. of $100+60 j$ volts acts on a circuit of which the admittance is $\cdot 2-\cdot 6 \mathrm{j}$. Determine ( $a$ ) the current, (b) the power delivered, and (c) the phase relation between current and E.M.F.
8. A $15-K$.W., 6o-cycle transformer has 1360 turns on the primary coil, its transformation ratio is $\frac{1}{20}$ and primary voltage 2080 . The mean length of its magnetic circuit is 180 cms., mean section 102 sq. cms. Assuming a permeability of 2200 , a hysteris constant of .0015 erg per gauss per cubic cm . per cycle, and that the eddy current loss is equal to one-quarter of the hysteresis loss, determine (a) the turns on the secondary coil, (b) the iron loss, and (c) the exciting current.
9. The resistance of the primary and secondary coils of the transformer specified in question 8, is 2.2 ohms and 005 ohm respectively. Calculate the efficiency of the transformer $(a)$ at full load, and (b) at one-half load.
io. In a wattmeter the readings are correct only when the current which flows through one coil is proportional to the E.M.F., and this is true only when this coil is non-inductive. If the resistance of this coil is 100 ohms and is inductance in or hensy, will the meter read high or low and what will the percentage error be?

Note-100 marks constitutes a full paper.

Queen's University Exammations : April, 1907.

> FACULTY OF PRACTICAL SCIENCE.

## Electrical Engineering IV.

1. A 6-pole, ${ }^{250-K}$. W., 500-550-volt D.C. railway generator is multiple wound with 1200 conductors and runs at 320 r.p.m. There are 600 commutator segments, and the resistance between brushes is .024 ohm. The excitation per pole at no load is 6000 ampere-turns, and at full load 8900 ampere turns, with 2.3 amperes shunt current. Determine (a) the flux per pole at no load, (b) the demagnetising ampere-turns at full load, assuming the brushes to lead by the width of 8 segments, (c) the series turns required to effect the compounding.
2. The brushes of a machine when at rest are shifted a distance equal to the pole pitch. How will the machine act when started $(a)$ if it is a generator, (b) if it is a motor? What would happen in each case if the brushes were shifted when the machine was in operation?
3. A $600-\mathrm{K}$. W. $550-$ volt generator is driven at no load and normal speed and excitation by a inovolt motor, and the current taken by the armature of the motor is 150 amperes. When running alone the motor takes 15 amperes in its armature. The normal shunt current of the generator is 4 amperes, resistance of armature .006 ohm , and resistance of series winding .OOI 3 ohm. Determine its efficiency.
4. How.do the various losses in a machine depend on the speed? How does the capacity of a machine depend on the speed?
5. A small motor was tested with a brake consisting of a $6^{\prime \prime}$ pulley with a cord extending over the top. One end of the cord was attached to a 5 lb . weight which rested on a balance, and the other end supported a i lb. weight. When running at 1800 r.p.m., the balance indicated 2 lbs ., and the motor intake was 4 amperes at 100 volts. Determine its efficiency.
6. Determine the relative amount of copper required to transmit a given amount of power with the 3 -wire system as compared to the 2 -wire system, the section of the neutral wire being made equal to onehalf of each of the outer wires and the efficiency being the same in each case.
7. A storage battery is required on a $600-$ volt railway system to carry a peak load averaging 300 H.P. for i hour. Allowing an average discharge current equal to twice the normal and the battery to be $75 \%$ discharged, determine $(a)$ the number of cells required, and (b) the normal current capacity.
8. A resistance is placed in series with the field winding of a motor so that its field flux is reduced $25 \%$. How and to what extent will this affect the motor in service?
9. A 220 -volt, 3 -wire system, is balanced by a motor-generator set. If the resistance of each armature is .04 ohm, determine the voltage between the outer wires and neutral when the system is 40 amperes out of balance.

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## Electrical Engineering, V.

1. An ordinary transformer rated at 5 K.W., ioo volts primary and 20 volts secondary, is connected up as an auto-transformer to convert roo volts to 120. Determine the rating of the transformer when so used.
2. Two wattmeters, $A$ and $B$, have their current coils connected in mains $I$ and 2 of a 3 -phase generator and their potential coils connected to main 3. Meter A indicates 220 K . W., and meter B indicates 191 K.W. What is the power output? Assuming the system to be balanced, what is the power factor? If the E.M.F. between mains is 2200 volts what is the current in each main?
3. A rotary converter, 600 volts direct, is equipped with six rings, so that it will operate on a two phase or three phase system. Determine the various alternating E. M.F.'s which may be obtained from this converter.
4. A 2-phase 2200 volt alternator wound with 9 conductors per phase per pole delivers 3000 K . W. to a circuit of which the power factor is .9 . Calculate the demagnetising ampere-turns per pole. If the armature resistance is .or 8 ohm , and armature reactance .76 ohm, calculate the armature drop with the above load.
5. A 3-phase Y-connected generator has 40 poles, 2 slots per phase per pole, 9 conductors per slot, flux
per pole $835 \times 10^{4}$, and runs at 75 R.P.M. Determine (a) the frequency, and (b) the E.M.F. between rings.
6. Each circuit of a 3-phase Y-connected induction motor operating on a 1 Io-volt circuit has the following constants: $Y_{0}=. \mathrm{or}+. \mathrm{I} j ; Z_{1}=. \mathrm{I}-.3 j ; Z_{2}=. \mathrm{I}-.3 j$. If the slip is $4 \%$ calculate $(a)$ the line current, (b) the power factor, $(c)$ the output.
7. A step-down transformer, primary resistance 2 ohms, primary reactance 5 ohms, secondary resistance . 02 ohm, secondary reactance .05 ohm, transformation ratio io, supplies current at 200 volts to a line of which the resistance is 3 ohms and reactance 4 ohms. If the exciting current of the transformer is .2 ampere and the core loss 250 watts, determine, by means of the vector diagram, the magnitude and phase relation of the primary E.M.F. and current.
8. A single phase $21 / 2 \mathrm{~K}$. W. rotary converter takes power from ino volt D.C. mains. With open secondary it takes 2 amperes in the armature at full speed, and when the secondary power factor is unity at full load, the exciting current is 1 ampere. The armature resistance between primary brushes is . 15 ohm. Assuming the copper loss in the armature to be $15 \%$ more when running as a converter than when running as a D.C. generator determine its efficiency.
9. If power at the generator costs $\$ 20$ per kilowatt per year and copper costs 18 cents per lb ., how far will it pay to transmit power from a 10,000 volt 3 phase generator at $80 \%$ efficiency and sell it at $\$ 50$ per kilowatt? Assume the total cost of the line to be double that of the copper and allow $10 \%$ of the cost for interest and depreciation.

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## Electrical Engineering VI.

Note-100 marks constitutes a full paper.
Value.
I. A series transformer is required to convert 500 amperes to 5 amperes, frequency 30 . The impedance of the secondary circuit (including secondary coil) is to be 2 ohms, resistance 1.8 ohms, and the primary coil is to have only i turn. Determine (a) the number of secondary turns, (b) the sectional area of the magnetic circuit, allowing a flux density of 45,000 per sq. in., (c) the efficiency assuming the resistance of the secondary circuit to be .8 ohm , and resistance of the primary to be negligible, and (d) the total power taken by the primary.
2. A shell type transformer is to be used to convert 2,200 volts to 220 , I IO or 55 , frequency 60. The capacity is to be $100 \mathrm{~K} . \mathrm{W}$. and the efficiency $97 \frac{1}{2} \%$. At full load the iron loss is to be equal to two-thirds of the copper loss with a maximum induction of 4,800 , and the eddy current loss is to be equal to one-sixth of the hysteresis loss. Determine (a) the dimensions of the magnetic circuit, (b) the arrangement and number of turns on the coils, (c) the sectional areas of the wires required, and (d) the thickness of the laminations.
3. Determine the following data for a 25 -H.P., 500 -volt, D. C., shunt wound motor to run at 800 R.P.M. : (a) Diameter and width of armature, (b) number of conductors, (series winding), (c) size of conductors, $(d)$ number and dimensions of slots, and (e) number of commutator segments.
4. Design a rheostat for use in starting a roH.P., 220-volt shunt motor, assuming that its armature efficiency is $90 \%$, and that it has to start under $40 \%$ of full load. The maximum current in starting should not be more than double what is required to provide the starting torque.
5. The diameter of the field core of a $500-\mathrm{volt}$ 4 -pole generator is $7 \cdot 5^{\prime \prime}$ and its length is $7^{\prime \prime}$. Determine the size of the wire and number of turns required to give an excitation of 6,000 am-pere-turns so that the temperature rise will not exceed $60^{\circ} \mathrm{C}$. Assume that .35 watt will radiate per sq. in. from the peripheral surface per degree of rise in temperature.

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## Railway Engineering I.

1. Describe the staking out and cross-sectioning of a short piece of line, running from a fill into a cut.
2. Describe a method of obtaining elevations for staking out a vertical curve between two adverse grades.
3. In long low embankment work where grade is built from side ditches, give note book headings and fill in notes for three cross-sections.
4. Give the different classifications of material.
5. Describe the work of measuring up for a monthly or progress estimate.
6. Describe the notes that should be kept in a Pile record book.
7. What information must the plans, profiles and books of reference contain that are filed with the Minister for his approval?
8. How much land can be taken by a railway company without the consent of the owner?
9. Under what conditions may spurs and branches be built without exceeding the powers granted in charter and the location approved of by the Minister?
ıo. What requirements have to be filled before building a bridge across a navigable stream?
in. What rate percent. of adverse grade is necessary to stop a train in 1500 feet, when running at the rate of 30 miles per hour?

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## Railway Engineering II.

1. Determine the length and give a plan of the staking out of a stone box culvert, $2^{\prime} 6^{\prime \prime}$ wide by $3^{\prime}$ high opening. Parapet wall parallel with track, no wing walls, top of parapet wall $3^{\prime}$ above top of opening, width of road bed at sub grade $16^{\prime}$, grade of culvert $\mathrm{I}^{\prime}$ in $100^{\prime}$, fill on centre line $18^{\prime}$, centre line of culvert making an angle of $60^{\circ}$ with centre line of track.
2. Sketch roughly a frame trestle bent $45^{\prime}$ high, resting on masonry supports, showing cross section of deck, and name each of the parts.
3. Describe the various ways of providing for the super elevation of the outer rail on curves on timber trestles.
4. Enumerate the different items that must be considered in estimating the cost of construction of a portion of railway from the contractor's standpoint.
5. Describe the engineer's position with relation to the contractor and the company.
6. Describe the various foundations that may be used for frame trestle bents, and discuss their advantages and disadvantages.
7. Describe the method known as the "American System" of excavating a tunnel in solid rock.
8. Discuss the number of piles required, and their spacing, in a pile trestle bent to carry heavy engines and fast trains.
9. Discuss the opening up and taking out of a short rock cutting covered with from I foot to 3 feet of earth. Cut about 15 ' deep and 200 ' long, the fill adjoining being short and deep.

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## Railway Engineering III.

## Maintenance of Structures.

1. Describe the various methods of drying sand for engine use.
2. Discuss the selection of a design of engine house to house 25 engines, first at Toronto where space is limited and secondly near Montreal where there is ample room.
3. In designing a round-house, the panel length of the inside front being $14^{\prime}$ and the length of the turntable $60^{\prime}$, gage of track $4^{\prime}, 81 / 2^{\prime \prime}$, and frogs placed in approach tracks, with the distance from gage side to gage side of rail at turntable circle $81 / 2^{\prime \prime}$, what will be the radius of circle for laying out the inner front of round-house?
4. How should the drainage from the roof and engine pits of a round-house be taken care of ?
5. Discuss the heating and lighting of a roundhouse in a northern climate.
6. Describe the different floors that are used in round-houses, and point out the weak places in each class of floor.
7. Describe a freight platform between a freight shed and a siding.
8. Describe the construction of an ice house capable of storing 400 tons of ice.
9. Describe the inspection of a steel pin connected through truss.
10. Describe the painting and the precautions taken when repainting a badly rusted steel bridge.

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## Railway Engineering III.

Maintenance of Track.

1. What work is done by a section gang under what is known as "spring work"?
2. Describe the work of tie renewal from the breaking of ballast to cleaning up.
3. Why are tie-plates used, and where are they used to the best advantage?
4. What is centre bound track, what causes it, and how can it be remedied?
5. Give the various causes which produce damaged rails.
6. Describe a "slip switch" and state where it can be used to advantage.
7. Describe a "twin switch", where are they used, and why?
8. What degree of curve and radius of curve would correspond to a No. io frog?
9. Give the various causes of spread track.
ı. What are some of the causes of extra short life of some ties, and how can they be avoided ?
ir. Two turnouts are to be placed on the main line on a $2^{\circ}$ curve, one to the inside and one to the outside of the curve, the frogs for both turnouts to be No. 10. What will be the degree of turnout curves, and what will the length of the leads be?
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## Municipal Engineering.

FIRST PAPER.

## Street Railrway and Water Works.

I. Describe the evolution of the present girder rail from the flat top iron strap rail as first used on street railways.
2. What precautions must be taken in laying the steel for a street railway track?
3. A simple curve of $90^{\circ}$ central angle and 50 feet radius is to be eased at each end without changing the location of centre of curve. Find the easement required for a wheel base of 5 feet.

4, Describe a method of locating a trolley line for a single track electric railway, having given the plan of curve with its easements.
5. What are jump-over frogs? Where and why are they used ?
6. What is the cause of Electrolysis and how can it be avoided?
7. What constitutes polluted water as applied to a public water supply?
8. Describe the material required to lay a $6^{\prime \prime}$ cast iron water main along one block and street intersection in the residential portion of a town, fulfilling all the requirements of the district.
9. A sand filtration plant in operation is without a set of rules for the guidance of its operators. Frame a set of rules.

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faculty of practical science.

## Municipal Engineering.

 SECOND PAPER.
## Streets and Servers.

1. Describe the separate and combined systems of sewerage.
2. Describe the different physical conditions that have to be considered in designing a combined system of sewerage.
3. Find the hydraulic mean radius of a 36 inch sewer flowing 12 inches deep.
4. Find the discharge of a smooth brick sewer 36 inches in diameter flowing half full on a $1 \%$ grade $\mathrm{C}=.013$.
5. What information and data must be secured to properly determine the size of a sewer at any point?
6. A road way of 32 feet in width and crown of 8 inches : How much below the crown are points 5 . 10 and 14 feet distant from the centre ?
7. In constructing a macadam roadway 32 feet from curb to curb, it is decided to have the metal 6 inches deep after rolling, what will be the cost of the material delivered, to construct such a roadway 1000 feet long, broken stone $\$ 7.50$ a toise delivered, and binder at $\$ 2.50$ per load of 2 cubic yards.
8. To what tests are paving brick subjected. Describe each test and state the reason for so testing.
9. Describe the construction of a bitulithic pavement.
10. Describe the construction of a stone block pavement 22 feet wide on a level grade, and also on a $71 / 2 \%$ grade.
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## Hydraulics 1.

[Do one part only of questions 4 and $6 ; 6$ questions including 1 and 8 are a full paper].
i. The cross-section of a dam is as follows: $\mathrm{Io}^{\prime}$ broad on top, $15^{\prime}$ high, with a batter of $30^{\circ}$ from the vertical on each side. The weight of material in the dam is 150 lbs. per cubic foot. Find the normal horizontal and vertical pressures, also the centre of pressure and over turning moment.
2. A tank of i sq. foot area discharges through a standard tube ; 2 cubic feet of water come into the tank each second and maintain a constant head of 9 feet above the standard tube. Find the area of the standard tube.
3. Explain the use of coefficients as applied to orifices and tubes or pipe entrances; if the coefficient becomes .75 for entry to a pipe, what is the loss in head at entrance if $v=10$ feet.
4. For a trapezoidal ditch there are the following values given: $s=.001 ; V=30^{\circ} ; Q=50$ cubic feet per second. $\mathrm{C}=50$. Find the best cross-section for this ditch,
or,

A rectangular flume of best dimensions on a grade of $.2 \%$ carries water I foot deep. $\mathrm{C}=100$. Find the quantity of water passing, and the diameter of a pipe which will carry it across a gulch, with a drop of 20 feet. Length of pipe 1000 feet. $C=130$.
5. A pipe line 1 foot in diameter, 1000 feet long, has five $90^{\circ}$ curves; $R=4$ feet. There is also a throttle valve turned through $40^{\circ}$. The total head H on the cutlet is 100 feet. Find the effective head, the velocity, and the discharge of the water in this pipe.
6. A flume 10 feet broad runs i feet deep with water at a velocity of $I$ foot per second. A board 2 feet deep is placed across the bottom of this flume. Find the exact height of the water at the back of this obstruction,

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o r,
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A contracted weir of breadth $b=5$ feet, is placed in a stream which is 1.5 feet deep and 12 feet broad as it approaches this weir. Find the exact discharge over the weir.
7. A pipe line 1 foot in diameter leaves a tank under a head of 4 feet of water, it then slopes 500 feet down hill with a drop of 60 feet more, and terminates in a nozzle of .2 feet diameter. The coefficient of discharge for the nozzle is .90 . Find the velocity and discharge, and sketch the hydraulic gradient giving values for the drops in the gradient.
8. A and B are two points 200 feet apart on a level pipe line. Half way between $A$ and $B$ the pipes diameter changes (without loss of energy) from i foot to 1.5 feet diameter. Pressure guages at A and B read respectively 4.3403 and 3.4722 lbs , per sq. inch. From this data, and allowing for friction between A and B , find the discharge passing through the pipe line.

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## Hydraulic Engineering II.

i. The breaks in levees are usually from one of five causes ; describe them.
2. Describe the construction of a levee giving probable dimensions of embankments and borrows.
3. Describe sand boils along the land side of a levee. Give cause and treatment.
4. Describe the action of jetties. Where would you place jetties to improve the entrance of a river carrying a large proportion of sediment and flowing into a lake with flat bottom, the river having three outlets?
5. A lock and dam are to be placed at the bend in a river. Where would you place the lock and dam? Give the reasons for your choice and make a sketch showing bend in river, position of lock and dam and direction of current.
6. Sketch roughly the plan of a lock at the end of a long reach and name all the parts.
7. What forces is each part of the lock designed to withstand?
8. What is the use of an upper and lower coffer wall ?
9. Name the principal parts of a movable dam, state the functions they have to perform and their relation to the lock.

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## Hydraulic Engineering III.

I. A dam is placed in a stream, the cross section of the valley being assumed to be a parabola, the maximum depth of water being 6 feet and the width roo feet. The slope of the stream being 2 feet in the mile, the dam to raise the water 8 feet at crest of dam. To what height will the water be raised at the hydraulic limit? Assume the value of C in the equations $\mathrm{V}=c_{1} / \mathrm{R}$.S. at I 25 when R is greatest and creasing by 5 every half mile.
2. How would you construct a rock-fill dam in a tidal water where the flow would be in both directions?
3. The down stream side of the crest of a masonary or concrete dam is usually built in the form of a curve. How are the dimensions of a curve determined ?
4. The volume of water flowing over a spillway, when the guage shows 6 inches on crest, is calculated to be 300 cubic feet per second. How many cubic feet per second will be discharged when the stage of the water is at 4 feet and at $51 / 2$ feet on the crest?
5. With an earthen dam a wasteway must be provided, how does the area of the reservoir affect the size of the wasteway? Give an example of two streams of equal discharge and reservoir capacity, area of reservoir in the proportion of 3 to I. Assume the maximum and minnimum discharge of stream into reservoir, duration of flood and safe height to which water can be raised over crest of wasteway.
6. The water that is diverted from a stream is equal to $\frac{1}{5}$ of the low stage flow. The stream before water was diverted developed 200 H.P. at low stage which lasted for three months and $600 \mathrm{H} . \mathrm{P}$. for 2 months, and surplus water running to waste for the remaining 7 months of the year. The mill owner has turbines capable of developing 600 H.P., and a supplimentary stream plant of 450 H.P. The mill requires 600 H.P. to operate it. What is the proper basis for the valuation of his loss.
7. An earthen dam is to be built for impounding water to a depth of 24 feet. Material available is sandy gravel, clay fit for puddle has to be imported. Design section for dam.
8. What precautions are necessary in laying a pipe or penstock of $36^{\prime \prime}$ diameter through an earthen dam with masonry cover wall, where the pipe is laid at or near the bottom of dam?

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## Hydraulic Engineering IV.

## Irrigation.

I. What effect has irrigation upon land that is improperly or insufficiently drained?
2. From what sources may water be obtained for irrigation purposes?
3. What are the three principal conditions required in an irrigation canal?
4. Name the parts of a headwork and the functions of each.
5. Describe a wasteway or escape, stating where it is placed and why so placed.
6. Explain how the drainage from the land on the higher side of the irrigation canal is taken care of under various conditions.
7. Why are distributaries used? Where are they usually placed and what governs their size?
8. Name and describe the five ways in which a cubic foot of water is expended after entering the canal.
9. Describe the three methods of flooding-side hill method, level or terrace flooding, and checker board system.
10. Describe the system of sub-surface irrigation, and give its good and bad points.

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## Structural Engineering I.

Marks
I. Enumerate the tools used in cutting stone and the various classes of finished surfaces.
2. Name and describe the joints which occur in stratified rocks, and also those in granites and other eruptive rocks, which facilitate quarrying.
3. Describe the advantages of the various kinds of bond used in stone work.
4. Estimate the cost of a concrete pier 6 feet wide, 32 feet long, and 40 feet high from bed rock to bridge seat, an excavation 12 feet deep being required through loose gravel to rock. Assume all data required, and tabulate the various items of cost.
5. Make a sketch drawing to scale of a composite roof truss of any type, showing particularly the method of making the joints.
6. Draw a practical profile of a three-centre arch of 40 feet span and $13^{\prime} 4^{\prime \prime}$ rise, to carry a highway. Abutments 14 feet high from bed rock. Show on the profile the names and dimensions of the various parts.
7. What purposes are served by the following: coping, batter, pointing, offsetting, chisel draft, doweling, cramping, weep holes, lagging, sheet piling?
8. Discuss the safety of a floor for a lecture room, $18^{\prime} \times 38^{\prime}$, using the following data: white pine joints $3^{\prime \prime} \times 12^{\prime \prime}$, spaced $18^{\prime \prime}$ c to c ; rough floor $11 / 4^{\prime \prime}$ matcned white pine laid diagonally, finished floor hard maple $3 / 4^{\prime \prime}$ thick.

NOTE- 100 marks constitue a full paper.

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## Structural Engineering II.

1. Discuss the calculations in determining the resistance of a bridge pier to overturning.
2. What form should be given to the up stream and down stream ends of a masonry pier in a swift river carrying drift and ice at flood? And give reasons for the forms selected.
3. A coffer dam is to be designed for unwatering the foundation of a pier $10^{\prime}$ wide and $25^{\prime}$ long, which is to rest on hard blue clay in 10' of water. Make rough dimensioned sketches of the design of dam and its several parts in detail to enable draughtsman to make finished drawings.
4. Describe the sinking of a $6^{\prime}$ cast iron cylinder to form half of a bridge pier ; there is $20^{\prime}$ of water on site and $60^{\prime}$ of soft clay to hard pan. Give your reason for the adoption of this method.
5. A bridge pier in $10^{\prime}$ of water with current of 3 miles per hour is found to be undermined about $20^{\prime}$ in length, $3^{\prime}$ in width, and $I^{\prime}$ in depth. Describe how you would repair the pier.
6. Describe the five different ways that a contract may be discharged.
7. Define the difference between liquidated damages and penalties.
8. Describe fully the position that the engineer should take with reference to the contractor and the company.
9. In what particulars is a contract subject to interpretation and change without breaking it or necessitating a new agreement as to compensation?

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## Mechanical Engincering 1.

I. Will a standard $3 / 4^{\prime \prime}$ stud, made of ordinary machine steel, be unduly strained, if a man weighing 150 lbs. applies all of his weight to the end of a wrench which is 15 times the diameter of the nut in length ?
2. Design a pair of $15^{\circ}$ involute cast iron gears to transmit 15 horse-power. The velocity ratio is $3: 5$, and the distance between centres is 2 ft .8 ins. The pinion shaft makes 100 R. p. m.
3. A steel shaft is required to transmit power to a 30 -ton overhead travelling crane. The load is lifted at the rate of 4 feet per minute. Taking the mechanical efficiency of the crane gearing as $35 \%$, calculate the necessary size of shaft to run at 160 R. p. m. The twist must not exceed $I^{\circ}$ in a length equal to 30 times the diameter of the shaft.
4. A steel wedge $12^{\prime \prime}$ long, $2^{\prime \prime}$ thick, tapering on both sides to $O$, is used to wedge up a casting weighing 3000 lbs . by means of a hammer weighing 5 lbs . The coefficient of friction is 0.15 , and the striking velocity of the hammer is 25 ft . per second. How far will each blow drive the wedge? Also find the pull necessary to withdraw the wedge.
5. Design a square thread screw to raise a load of io tons. The screw must not overhaul. Coefficient of friction $=0.10$. Allowable unit stress $=12000 \mathrm{lbs}$. per sq. in. What moment will have to be exerted to lift the load? What will be the efficiency of the screw?

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## Mechanical Engineering II.

1. A belt embraces $150^{\circ}$ of the circumference of a pulley, 3 ft . in diameter, making 130 R.p.m. Coefficient of friction $=0.35$.

What is the maximum pull on the belt when 20 H.P. is being transmitted, and the belt is just on the point of slipping?
Calculate the width of belt required for single and double belt.
2. How much compression must be given to a vertical inverted high-speed steam-engine so as to just counteract the acceleration pressure at the ends of the stroke.

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\begin{aligned}
\text { Diameter of cylinder } & =91 / 2^{\prime \prime} . \\
\text { Stroke } & =12^{\prime \prime} .
\end{aligned}
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Length of connecting rod $=3 \mathrm{ft}$.
Weight of reciprocating parts $=160 \mathrm{lbs}$.

$$
\begin{aligned}
& \text { Speed }=300 \text { R.p.m. } \\
& \text { I.H.P. }=40 .
\end{aligned}
$$

3. Design a flywheel for the same engine, assuming the co-efficient of fluctuation of energy $m=0.3$. The engine is to run a D.C. electric generator for lighting.
4. The winding on a $16^{\prime \prime}$ armature of a dynamo weighs 40 lbs ., and is secured in position by winding phosphor bronze wire over it. The armature is to run at 1200 R.p.m. How many turns of No. 20 wire will be required, allowing a stress of 12,000 lbs. per square inch?
(OVER)
5. A loaded Porter governor geared to an engine with a velocity ratio 5 : i has rods and links one foot long, balls weighing 2 lbs . each, and a load of 100 lbs. ; the valve is full open when the arms are at $30^{\circ}$ to the vertical, and shut when at $45^{\circ}$.

Find the extreme working speeds of the engine. Calculate also the force required to hold the sleeve for an increase of speed of $2 \%$.
6. A marine engine indicating 500 H.P. at 60 R.p.m. drives a ship at a speed of 9 miles per hour. The thrust block is a collar whose diameters are $12^{\prime \prime}$ and $9^{\prime \prime}$ respectively. Coefficient of friction $=0$. r.

Find work lost per revolution and per horse power.

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## Mechanical Engineering IV.

## Part I.

1. A return-tubular boiler, $66^{\prime \prime}$ in diameter, containing 123 tubes, $3^{\prime \prime}$ in diameter by is feet long, gives the following results during a trial :

Duration of trial = 1 I $1 / 2$ hours.
Average steam pressure $=79.4 \mathrm{lbs}$. per sq. in. gauge.
Average temp. of feedwater $=175 \cdot 3^{\circ} \mathrm{F}$.
Coal burned $=7462 \mathrm{lbs}$.
Quality of steam $=99.6 \%$.
The coal was tested and was found to contain $8.6 \%$ of ash and $\mathrm{I} .2 \%$ of moisture, and to have a califoric value of 12874 B.T.U.
Calculate :
(a) The equivalent evaporation from and at $2 \mathrm{I} 2^{\circ} \mathrm{F}$. per lb . of combustible and per square foot of heating surface.
(b) Rated horse power and horse power developed in trial.
(c) Thermal efficiency of boiler.
2. A jet condenser is attached to a direct-acting - duplex steam-pump. Dia. of steam-cylinders $25^{\prime \prime}$; length of stroke $15^{\prime \prime}$; speed 75 strokes per minute for one plunger; steam pressure 80 lbs . per sq. in. gauge.

How much water must be furnished per hour if its temperature on entering is $60^{\circ} \mathrm{F}$. and on leaving $160^{\circ}$, the vacuum gauge showing $20^{\prime \prime}$ ?
3. In an inward-flow turbine the water enters the inlet circumference, 2 ft . dia., at 60 ft . per sec., and at $10^{\circ}$ to the tangent to the circumference. The velocity of flow through the wheel is 5 feet per second. The water leaves the inner circumference, I ft. dia., with a radial velocity of 5 feet per second. The peripheral velocity of the inlet surface of the wheel is 50 feet per second. Find the angles of the vanes (to the tangent) at the inlet and outlet surfaces.
4. Find quantity of water delivered, and horsepower required, to drive a single-acting pump working under following conditions: Dia. of pump barrel 2 ft ; stroke 6 ft .; slip $4 \%$; head of water on pump 50 ft . exclusive friction; speed of flow in main 3 ft . per second; length of main I mile; 20 strokes per minute; mechanical efficiency $80 \%$.
5. A jet of water, $11 / 2$ inch in diameter, moving at a velocity of 100 feet per second, impinges on the buckets of a Pelton wheel, moving with a velocity of 45 feet per second. The last tip of the vanes makes an angle of $150^{\circ}$ with the first tip. Find the pressure exerted on the vanes and the efficiency of the jet.

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## Mechanical Engineering IV.

SECOND PART.

## 1. Gas Engines.

Explain the working of an ordinary Otto cycle gas engine.

Why is the mixture compressed before being ignited?

What determines the proper compression pressure to be chosen?

Can the same engine be used for illuminating gas and blast furnace gas?

What are the requirements for perfect combustion in the cylinder?

What considerations determine the proper timing of the ignition?

Give advantages and disadvantages of regulating the speed by varying the quality of the charge, the quantity of the charge, and by the "hit-or-miss" method respectively?

## 2. Steam Boilers.

Describe briefly the construction of return-tubular and water-tube boilers. Point out the principal advantages and disadvantages of each system.

How is smoke formed, and how ean its formation be prevented?

Discuss the different systems of artificial draft.
Why is additional air sometimes admitted above the grate or behind the bridge wall, and what should determine the amount of air thus supplied?

What are the requirements for perfect combustion? What constitutes a boiler-horsepower ?
3. Water Motors.

Discuss the function of an accumulator in connection with a hydraulic power system.

Describe Pelton wheel, and state reasons why the theoretical efficiency of $100 \%$ cannot be reached, aside from the friction of the axle.

What must be the shape of vanes in turbines in order to prevent shock?

Enumerate principal characteristics of impulse and reaction turbines.

What limits the speed of a reciprocating pump?
State advantages and disadvantages of direct-acting pumps as compared with fly-wheel pumps.

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## Mechanism.

1. To design a pair of spur gears with involute teeth.

Distance between centers-12 in.
Velocity ratio- $\mathrm{I}: 3$.
Diametral pitch-No. 3 .
Arc of approach = arc of recess.
Arc of action = twice the circular pitch.
Calculate :
(a) Number of teeth for each wheel.
(b) Circular pitch.

Describe and illustrate by sketch, how to construct the outlines of the teeth of each gear.
2. Define :

Arcs of action, approach and recess.
Addendum.
Clearance.
Backlash.
Faces and flanks of teeth.
State characteristics of epicycloidal teeth. Give advantages and disadvantages of epicycloidal and involute systems of gearing.
3. What are the conditions for :
(a) Constant velocity ratio.
(b) Pure rolling motion, in direct-contact mechanism?

Deduce the expression for the angular velocity ratio of two cranks connected by a link, by means of instantaneous centers.
4. Explain how to obtain the velocity diagram for the motion of the ram of a shaper provided with a Whitworth Quick Return Motion. Give reasons.
5. Compound Atlantic Type Locomotive. Cylinder $151 / 2$ and 26 in . by 26 in . (stroke). Diameter of drivers 79 in.

For a speed of 75 miles per hour, determine :
(a) Linear velocity of point in circumference of driver.
(b) Linear velocity of center of crankpin.
(c) Mean piston speed.
(d) Revolutions per minute of crank shaft.

All linear velocities in feet per minute and relative to frame.

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FACULTY OF PRACTICAL SCIENCE.

## Surveying I.

|  |  |  |  |
| :---: | :---: | :---: | :---: |
| Course. | Bearing. | Distance. |  |
| AB | N 34 E | 560 feet |  |
| BC | S 68 E | 830 | " |
| CD | S 54 W | 982 |  |

Marks
I. Course. Bearing. Distance.

From the above field notes compute by the method of latitudes and departures the length and bearing of the course AD , and the area of the field in acres, showing all calculations required.
2. Describe minutely the adjustments of the Dumpy Level.
3. The reading on a rod at a distance of 2000 feet from the level is 7.246 feet. Find the true reading when the correction for curvature is applied. Mean radius of earth, $20,890,000$ feet.
4. A line measured by an Engineer's chain which is known to be o. I5 feet too short is recorded as 1462.4 feet. Find the length which the same line would be recorded by a Gunter's chain which is 0.1 feet too long.
5. Sta. A has an elevation of 123.45 feet, Sta. B 175.24 feet. Write an imaginary set of Level notes for the line AB , no rod reading to be greater than 11.5 , nor less than 0.5 feet.
6. A reading of 4.754 feet is taken on a rod held 400 feet distant. The level is then inclined and a second reading of 8.654 feet obtained. The bubble is observed to pass through io divisions. Find the value of 1 division of the
bubble.

I I
7. Describe the construction of the telescope of a transit with erecting eyepiece.

IO
8. Describe briefly the process of chaining a line over moderately rough ground.

Queen's University Examinations : April, 1907.

## Surveyfing 11.

## Marks.

I. Describe in their proper order the adjustments of the transit. (Not more than 300 words to be used).
2. A line starts at sta. $9+34$ and runs N. $14^{\circ}$ E., circle reading $o^{\circ} 0 o^{\prime}$. At sta. $18+74$ the line deflects $13^{\circ} 26^{\prime}$ right, to sta. $27+45$, then left $46^{\circ} 35^{\prime}$ to sta. $39+84$. Find the distance, bearing and circle reading from sta. $9+34$ to sta. $39+84$.
3. Describe the theory and practice of stadia surveying. Find the horizontal distance from the centre of instrument to the rod, using the following data:-Upper reading 8.22, lower reading 2.28 , vertical angle $22^{\circ} 35^{\prime}, \mathrm{c}=0.75 \mathrm{ft}$., $\mathrm{f}=\mathrm{I} . \mathrm{Ift}$.
4. ABC are three stations on shore, AB being 748 ft . and BC 400 ft . The angle ABC is $110^{\circ} 45^{\prime}$. From a boat at P , the two angles, APB and BPC are measured with a sextant, and found to be $29^{\circ} 30^{\prime}$ and $17^{\circ}$ 10' respectively. Find the distance from P to A .
5. Name the essential parts of the sextant, and show by means of a diagram how an angle may be measured with it. The angle between the sun and its image in the artificial horizon is recorded by a sextant as $78^{\circ} 27^{\prime}$. Index error $-0^{\circ} 6^{\prime}$, refraction $I^{\prime} 00^{\prime \prime}$, declination $6^{\circ} 27^{\prime} \mathrm{S}$. Find the latitude of the place.
6. Name three methods of finding the quantity of a railway cut or fill. From the following field notes find the amount of cut between stations 127 and I30:Sta. Gr. Elevation

|  |  | C. | R. | L. |
| :---: | :---: | :---: | :---: | :---: |
| $127+00$ | $74 \cdot 5$ | 86.5 | 88.5 | 84.5 |
| $128+00$ | 74.9 | 78.9 | 79.9 | $77 \cdot 9$ |
| $129+00$ | $75 \cdot 3$ | $75 \cdot 3$ | 75.8 | 74.8 |
| $130+00$ | $75 \cdot 7$ | $7 \mathrm{I} \cdot 7$ | 72.7 | 70.7 |

Side slopes $11 / 2-1$, roadbed 22 ft . wide.
7. An up grade of $0.8 \%$ meets a down grade of $0.6 \%$ at station $142+50$, elev. $127 \cdot 30$. Show how to put in a vertical curve between the two grades, giving the elevations of the B.V.C. and E.V.C., and of all stations on the curve.
8. Enumerate the methods used for determining the discharge of a stream. If $\mathrm{Q}=3.33 \mathrm{LH}^{\frac{3}{2}}$, find how many gallons per minute will flow over a weir 8 ft . long with a depth of 0.49 ft . of water over the crest.
9. Chainage of P.I. $432+78$. Intersection angle $49^{\circ} 30^{\prime}$. Degree of curve $4^{\circ} 30^{\prime}$. Find chainage of B.C. and E.C.

Note-100 marks constitute a full paper.

Queen's University Examinations : Aprul, 1907.

FACULTY OF PRACTICAL SCIENCE.

## Surveying IV.

Marks
I. What monuments would be placed at the following corners and how would they be marked ?
(a) Corner between Tps 5 and 6 , and the 3 rd and 4 th ranges.
(b) Northeast corner of Tp 6 , range 5 -
(c) Corner between secs. 15, 16, $21,22, \mathrm{Tp} 6$, range 4 .
2. Make a sketch of a township laid out according to the 3 rd system.
3. Describe briefly the sub-division of a block into townships, and of a township into sections and quarter sections.
4. Give a sample page of field notes used in the sub-division of a township.
5. Make a sketch showing in plan and elevation, the post, mound, and pits for a boundary monument on correction line, giving all principal dimensions.
6. Three separate measurements of a base line were as follows :

$$
\begin{aligned}
& \text { I } 5375.784 \text { feet. } \\
& \text { I } 5375.127 \\
& \text { I } 5375.396
\end{aligned}
$$

What was the probable error of a single measurement and of the mean?
7. Describe the method of measuring a base line with steel tapes where an accuracy of 1 in 500,000 is required, and enumerate the corrections to be applied.
8. The strike of a vein is N. $45^{\circ}$ E., pitch N.W., dip $60^{\circ}$ with the horizontal. From a point on the outcrop the mouth of a tunnel bears S. $30^{\circ}$ E., vertical angle $-25^{\circ}$, distance (measured along the slope) i8o feet. Find the distance which the tunnel would have to be run so as to strike the vein, and the depth of the breast of tunnel below point of outcrop, the tunnel being run horizontally.
9. Describe the method of determining latitude and azimuth by observations on Polaris at culmination and elongation.
10. Circle reading on reference object $0^{\circ} 0^{\prime}$. Circle reading on star $16^{\circ} 27^{\prime} 30^{\prime \prime}$. Altitude of star $64^{\circ} 30^{\prime}$. Latitude of place $44^{\circ} 13^{\prime}$. Dec. of $\operatorname{star} 62^{\circ} 16^{\prime} 30^{\prime \prime}$. Find the circle reading of true north, and the time which will elapse before culmination, the star being observed between eastern elongation and upper culmination.

Note-100 marks constitute a full paper.

Queen's University Examinations : April, 1907.

## FACULTY OF PRACTICAL SCIENCE.

## The Use of Explosives.

[One Hour].
I. Discribe the process of burning of Black Powder and Nitro-Glycerine. What is the relative power of one to the other?
2. What is the proper method of thawing dynamite? And give reasons.
3. If a hole charged with dynamite and detonating cap has missed fire, how would you proceed to remove charge?
4. What is the difference between high, low, and medium tension fuses and how may each be fired?
5. How would you arrive at the sizes of the charges for blasting in a quarry, the purpose for which the rock taken out is to be used being given?

Queen's University Examinations : April, 1907.

FACULTY OF PRACTICAL SCIENCE.

## Mining Law.

(Only ten questions to be answered).
I. Set out briefly the steps necessary in examination of the title to a mining property.
2. Give the general divisions of property and illustrate their differences by application to a silver mine.
3. What are the elements of mining agreements? Illustrate by examples.
4. Describe steps necessary to acquire and protect a "discovery" under the Mines Act.
5. How is a "working-permit" acquired ?
6. Define "negligence" in law, from which civil liability arises, and give instances.
7. Explain the liability of a master for the negligence of his servant, and when a master is not liable for the negligence of his servant.
8. Define contributory negligence and illustrate.
9. Define the range of criminal negligence.
10. Define fraud and state its essential elements.
II. Distinguish between misrepresentation and fraud.
12. What is the liability of directors for false representations in a prospectus?

Queen's University Examinations : April, 1907.

## FACULTY OF PRACTICAL SCIENCE.

## Descriptive Geometry.

I. A plane making an angle of 45 degrees with the horizontal and 60 degrees with the vertical plane, cuts the axis of a circular cylinder 2 inches in diameter, at a point 1 inch above the horizontal plane. The axis of the cylinder is vertical and inch in front of the vertical plane. Draw plan, elevation, true shape of section, and development of cylinder, showing line of section.
2. An embankment io feet high, 12 feet wide on top, side slopes $11 / 2-1$, centre line bearing $N$. 30 degrees W., crosses a second embankment io feet high, 16 feet wide on top, side slopes $\mathrm{I}-\mathrm{I}$, centre line bearing N. 40 degrees E. Draw the plan, and an elevation on the prime vertical, and find bearing and slope of intersection lines of side slopes. Give angles to nearest degree. Scale, 20 feet to the inch.
3. The strike of a vein is N. 45 degrees W., dip 30 degrees with the horizontal, pitch S.W. The strike of a fault is N. 30 degrees E., dip 45 degrees, pitch S. 60 degrees E. Find the dip and bearing of the line of section of vein and fault, and also the dihedral angle between their planes.
4. A tunnel runs N. 45 degrees W., dipping at 30 degrees with the horizontal ; a road starts at the level of the mouth of the tunnel and 300 feet due west of it, running N. 45 degrees E. and sloping up at 20 degrees. Find the point where the shortest possible shaft may be sunk from the road to the tunnel, and find the depth of such shaft. Scale ioo feet to the inch.
5. Find the dihedral angles of a right square pyramid of 2 inch base and 2 inch altitude. Angles to be given to the nearest degree.
6. Draw an isometric projection of a building io feet by 12 feet and 8 feet post, with roof of 45 degree pitch, showing an opening for a door 3 feet by 7 feet in the middle of the end, and an opening for a window 3 feet by 4 feet in the middle of the side, the bottom of window opening being $21 / 2$ feet above the ground. Thickness of walls 8 inches, roof projecting 8 inches at ends and sides. Scale 4 feet to the inch.
7. Draw plan and elevation of a circle of 3 inches diameter whose plane makes an angle of 60 degrees with the horizontal and 30 degrees with the vertical plane, and draw projections of a diameter inclined at 30 degrees with the horizontal plane. The lowest point of the circumference to be $1 / 2$ inch above the horizontal plane. 12
8. A right circular cone of 3 inches diameter and 3 inches high is axially and perpendicularly intersected at a point $11 / 2$ inches from the apex by the axis of a cylinder 2 inches in diameter.

Draw plan and elevation of the curve of intersection when the axis of the cylinder makes an angle of 45 degrees with the vertical plane and the axis of the cone is vertical.
9. Draw two complete turns of a V threaded screw. Pitch $1 / 2$ inch, angle of thread 60 degrees, outside diameter 2 inches.

Note. - 100 marks constitute a full paper.

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THEOLOGY.

Queen's University Enaminations: April, 1907.

## New Testament Criticism,

1. Was the Epistle to the Ephesians written to the Church at Ephesus? Give arguments in support of. your opinion.
2. The Pauline authorship of Ephesians is denied, because of (1) the presence of such words as dirjowna,
 Christology and that of the acknowledged Pauline Epistles, (3) the application of the term dieot to the A postles. Discuss these objections.
3. Criticise the theory "that Ephesians is a forgery based on Coloissians."
4. State Lightfoot's view as to the order in time of the composition of Eph., Phil., and Col., and discuss it briefly.
5. Objection is made to the Pauline authorship of the Pastoral Epistles, that they contain many words not found in the generally acknowleged Epistles of Panl. Answer.
6. "Paul was a man of such lofty spirituality, that he would not have concerned himself about an ecclesiastical organisation such as we find in the Pastoral Epistles." Discuss the statement.
7. If $\pi \rho \varepsilon \sigma \beta \dot{\tau} \varepsilon_{\rho} o$ - and $\varepsilon \pi i \sigma z o \pi o s$ designate the same individual, why should there be two titles? Diseuss briefly the origin of the names.
8. Are there reasonable grounds for the theory that Paul was liberated from the Roman imprisonment mentioned in the Acts of the Apostles? If so, state them.
9. Under what aspects is the relation of Christ to the Church expressed in the Epistle to the Ephesians?

Queen's University Examinations: April, 190\%.

## N.T. Language.

1. State the differences between $o \dot{u}$ and $\mu \dot{\prime}$, and dis ${ }^{2}$.
 $\sigma \tau \varepsilon \cup x \varepsilon$ and ótt óv $\pi \varepsilon \pi i \sigma \tau \varepsilon \cup \chi \varepsilon$.
2. State the difference between a concessive sens tence and a conditional sentence.


3. Explain (1) the construction of xut' $\dot{j} \mu \dot{\pi}$. Eiph,



4. Translate Eph. 3: 7 and 4:24.





5. Give the 2nd Aor. in all the Moods of ${ }^{v} \rho \chi \chi \circ \notin \kappa$,
 Indic. of sepie and Di'sogese.
;

I

Queen's University Examinations : April, 1907.

## N. T. Exegesis.

I. Translate, and write explanatory notes on :

```
Eph. i: 7-10, 22-23.
Eph. III: I3.
Phil. I: I6-18.
Phil. III : I6.
Col. I : ig.
I Tim. II : I5.
```

2. Point out the difference between $\delta_{\iota \kappa a \iota o \sigma v \nu \eta ं \nu ~}^{\tau \grave{\eta} \nu}$ $\epsilon ่ \nu \nu o ́ \mu \omega$, Phil. III : 6, and $\delta \iota \kappa a \iota o \sigma \nu \nu \eta \eta_{\nu} \tau \grave{\eta} \nu$ є่к $\nu o ́ \mu \omega$, Phil. III ; 9.
 12, and ö́oo oû̀ тé $\bar{\epsilon} \iota \circ \iota$, Phil. III : 15.
3. What is the meaning of $\pi \rho \omega т о ́ т о к о я ~ \pi \alpha ́ \sigma \eta s$ $\kappa \tau i \sigma \epsilon \omega s$ as applied to Christ in Col. I : I5? Give reasons for your interpretation.
4. State briefly the nature of the false teaching against which Paul is warning the Colossians.
5. Why should the reading ós be preferred to $\theta$ còs in I Tim. III: 16 ?
6. Paraphrase I Tim. Iv : 7-8.

Queen's University Examinations : April, 1907.

## Apologetics.

1. Can the Scripture record of man's innocence at his creation be reconciled with the scientific view of his origin? State the grounds of your opinion.
2. Show that the materialistic view of man, which regards his actions as necessary, and all equally right or legitimate, is subversive of morality and religion.
3. "Future life is uncertain, being unprovable and seemingly improbable, therefore we are justified in giving precedence to the affairs of this present state". Discuss this statement.
4. Indicate (I) the attitude of modern socialists to the teaching of Jesus, (2) the extent to which they accept it, (3) the ground of their opposition to the Christian Church.
5. State the argument for a future life based on the rational character of the universe.
6. Mention the principal causes of the rise of Deism in England.
7. What was the main object of Butler's Analogy of Religion?

Queen's University Examinations : April, 1907.

## Apologetics.

1. "There is a conflict between Science and Religion". Discuss this statement.
2. In maintaining the Theistic view of the universe and man, what would you make the startingpoint of your argument? Outline the course of reasoning you would follow.
3. What evidence do Haematology and Comparative Pathology furnish in support of the view that man is closely linked in his origin with the animal world beneath him?
4. "It detracts from the glory of the Creator and the dignity of man to regard him as the result of an evolutionary process". How would you answer such an assertion?
5. The Creator foreknew that man would commit moral evil, consequently He cannot Himself be supremely good. Critlcise this statement.
6. The absolute perfection of God is impugned on the ground that some animals are armed with weapons that inflict suffering and death, and are also carnivorous. How would you vindicate the Divine goodness?
7. On what grounds do you maintain the transcendence of God?

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Queen's University Examinations : April, 1907.

## Church History.

## A

i. Sketch the character of Marcus Aurelius. What were the chief problems before him, and how far was he successful in solving them?
2. What were the peculiar characteristics of the Persecution at Lyons? Contrast the procedure there with that followed in the case of the Scillitan martyrs.
3. Translate, with short notes on anything which you consider worth remarking upon, the following passages :



 $\tau \hat{\omega} \nu \quad \sigma \tau \rho a \tau \iota \omega \tau \hat{\omega} \nu$ Є่ $\pi i$ тои̂то $\pi a \rho о \rho \mu \omega ́ \nu \tau \tau \nu$ aủтои́s, катє-




At nos e contrario edimus protectorem, si litterae M . Aurelii gravissimi imperatoris requirantur, quibus illam Germanicam sitim Christianorum forte militum precationibus impetrato imbri discussam contestatur. Qui sicut non palam ab eiusmodi hominibus poenam dimovit, ita alio modo ralam dispersit, adiecta etiam accusatoribus damnatione, et quidem tetriore.
4. Point out the main lines of influence exercised by Gnosticism on the development of the Church.

> B

1. Show the significance for Theology of the attempt to reconstruct a life of Jesus.
2. In what respects did Reimarus anticipate the results of recent investigations? What were his chief defects?
3. Set forth Herder's views of the relation between the Synoptics and the fourth Gospel.
4. Give some examples of Paulus' rationalistic explanations. Criticise his general position.

## C.

1. Give some account of the Diets of Nuremberg, Spires and Augsburg.
2. What was Luther's attitude to the claims of the peasants and their attempts to assert them?
3. What was involved in the transference of authority from the Church to the Bible?
4. How did Luther and Zwingli differ as to their views on the Sacraments?

Queen's University Examinations : April, 1907.

## Systematic Theology.

[Three questions in each Part will be regarded as a full paper.]

## PART I.

The Person of Christ.

1. Compare the presentation of the Person and Ministry of Jesus in the Fourth Gospel with that in the Synoptic Gospels.
2. Discuss the meaning of the titles "Son of Man" and "Son of God."
3. Write an expository note on the words, John II:25, "I am the Resurrection and the Life."
4. Write an expository note on Phil. 2:6,7. " Who, being in the form of God, counted it not a prize to be on an equality with God, but emptied Himself, taking the form of a servant, being made in the likeness of men."

## PART II.

## The Atonement.

1. Write an expository note on 2 Cor. $5: 14,15$. "One died for all, therefore all died ; and He died for all that they which live should no longer live unto themselves, but unto Him Who for their sakes died and rose again."
2. State and examine Anselm's theory of the Atonement.
3. Examine the statement,- "If God graciously pardons our sins there can be no need of Atonement".
4. State and examine Dr. McLeod Campbell's theory of the Atonement.

Queen's University Examinations : April, 1907.

## OId Testament Criticism.

1. Parse eac̣h word in II. Sam. XiII. 3i, xiv. 6.
2. Translate carefully II. Sam. xiif. 39, xiv. I5.
3. Gen. xviif. Is it possible to regard this chapter as an organic unity? State clearly the reasons for the view that you maintain.
4. Translate Gen. XII. I-3. Discuss fully the meaning of the third verse.
5. Write a brief note on (I) the origin of the $\mathrm{He}-$ brew people, or (2) the growth of the monarchy.
6. Distinguish between the actual Solomon and the Solomon of tradition.
7. What account does the Priestly Document give of Abraham?
8. In what sense can we speak of "the lost ten tribes"? How is it that "the Jews" were not "lost"?

Queen's University Examinations : April, 1907.

## Old Testament Criticism.

B.D. Course, Aramaic-Daniel.
I. Mention some of the strongest arguments in favor of the Maccabean date.
2. How do you explain the use of two languages in the one book?
3. State as clearly as you can the force of the term "Aramaic"; why has the name old "Chaldee" been dropped.
4. Distinguish apocalypse from prophecy, and discuss the place of Daniel in Hebrew religious literature.
5. Translate II, 6, 7, II, 12, 28, 29, $41,42$.
6. Parse each word in II, 20, 29.
7. Give a list of grammatical differences between Hebrew and Aramaic.
8. Give in Hebrew and Aramaic : the king, the dream, O King live forever, to know.

Queen's University Examinations : April, 1907. HONOURS.

## N. T. Criticism and Exegesis.

I. State Van Manen's position regarding the authorship of i Cor. ; compare it with Loman's view, and criticise them both.
2. What historical evidence is there that I Cor. must have been in existence early in the second century?
3. What argument would you advance in support of the unity of 1 Cor. ?
4. State the date of the composition of I Cor., and show how this is determined.
5. Criticise the objection that Galatians was not written by Paul, because it was impossible that the contrast between Jewish Christianity and the spirituality of the Epistle could have appeared before 60 A.D.
6. In what respects does Galatians (i) resemble the Corinthian Eplstles, (2) differ from the Epistle to the Romans?
7. What date do Weber and Belser assign to the composition of Galatians, and on what grounds?
8. State the reasons which commend the view that Galatians was written from Antioch after Paul's first missionary journey.

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HONOURS.

## N. T. Criticism and Exegesis.

1. Explain I Cor. iii : 5, 15 .

I Cor. viii : 4,
I. Cor. xi : 10, 29-3I, 34 .

Gal. i : 10.
Gal. ii : 2, 8, 19.
2. To what does tav̂ta $\delta e ́$, I Cor. iv : 6 , refer?
3. Criticise Ramsay's conclusion that Paul's visits, narrated in Acts xv and Gal. ii. i, are identical.
4. Write notes on (I) $\epsilon$ is $\tau \eta ̀ \nu ~ \epsilon ่ \mu \eta ̀ \nu ~ a ̉ \nu a ́ \mu \nu \eta \sigma \iota \nu$, I Cor. xi : 26. (b) Harnack's view of $\pi o \tau \eta \dot{p} \iota o \nu, ~ i ~ C o r . ~ x i ~: ~$

5. (1) Translate Gal. iii : $17-22$, (2) State the various characteristics of Law as contrasted with Promise, (3) Explain v. 20.
6. Paraphrase I Cor. iv : 3-5.

Queen's University Examinations: April, 1907.

## Old Testament Introduction.

> B.D. Course.

1. State what you know about the contents of the Yahwist document in Genesis.
2. What is the nature of the contents of Leviticus?
3. Give an analysis of Judges; state the process by which it is supposed to have arrived at its present form.
4. Mention some duplicate narratives in any of the histories.
5. Give the date now assigned to the Priestly document with the reasons that have led scholars to adopt this date.
6. Discuss the date of one of the following books : Job, Joel, Ecclesiastes or Jonah.
7. Compare the theological teaching and historical standpoint of Deutero-Isaiah with that of Isaiah of Jerusalem.
8. Write a note on one of the following subjects: "The Prophet's National Ideal," "The Prophetic Missionary Idea," "The Prophetic View of Suffering."
9. In what way can we attempt to decide the date of such pieces as Psalms I. and LI. ?


Queen's LTriversity Faminations: April, 190\%.
B.D. COURSE.

## Holy Scripture, O.T.

## General.

1. Mention some of the chief incidents in the life of Abraham, as told in Genesis.
2. State briefly the subjects treated in the book of Exodus.
3. Mention the chief divisions of Deuteronomy.
4. Give brief quotations from the following Psalms: l., ViII., xix., xxiif., cxix., exxxix.
5. Compare some statement of Kinge with a similar statement in Chronicles.
6. Give an outline of one of the following books: Amos, Ezekiel, Joel.
7. Give three quotations from either Proverbs or Job. Special-Isaiah.
8. Give an analysis of chapters I.-Xxxix.
9. Indicate briefly the contents of vi. and vir.
10. Give short quotations from I., xII., xxxv., and Lv.

Queen's University Examinations : Aprul, 1907.

## B. D. EXAMINATION.

## The Church.

I. Indicate some of the special difficulties in the study of the history of the Church.
2. What was the authority of the Apostles in the early Church ?
3. What were the functions of the $\epsilon \pi i \sigma \dot{\kappa} о \pi o s$ and of the $\delta \iota a$ ккovos in the early Church ?
4. What are the various uses of the word $\boldsymbol{\epsilon} \kappa \kappa \lambda \eta \sigma i ́ a$ in the Pauline Epistles?
5. What causes led to the snpremacy of the Episcopate?
6. How did the clergy come to be regarded as a distinct class?

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> EXAMINATION FOR B.D.

## N. T. Canon.

1. How did the early Christian Church regard the Apocryphal books? Give proof of your conclusion.
2. Into what periods may the formation of the Canon be divided, and what was the work done in each period?
3. How far can the Peshito Syriac and Old Latin versions be used in investigating the question of the Canon?
4. How did the Diocletian persecution affect the work of forming the Canon?
5. State Augustine's argument against the Manichæans for the integrity and authenticity of the Christian records.
6. At what Synod was the question of the Canon made a subject of discussion? What books are said to have been pronounced canonical? Discuss briefly the authenticity of this catalogue.

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B. D. EXAMINATION.

## The Atonement.

I. Give an outline of St. Paul's teaching regarding the Atonement in the Epistle to the Romans.
2. Write an expository note on 2 Cor. 5:2I. "Him Who knew no sin He made to be sin on our behalf ; that we might become the righteousness of God in Him."
3. Examine the view of the Atonement based on the conception of $\sin ,(1)$ as debt contracted towards God, and (2) as breach of God's law.
4. Compare the view of the Atonement which is determined by the Divine Sovereignty with that which is determined by the Divine Fatherhood.
5. What is the teaching regarding the Atonement in the Gospel and Epistles of St. John?
6. State and examine Dr. McLeod Campbell's theory of the Atonement.

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B. D. EXAMINATION.

## The Christian Conception of God.

1. On what grounds are we entitled to regard God as personal?
2. How is our idea of God affected by the doctrine of the Incarnation?
3. Compare the Christian conception of God with (1) the Deistic, and (2) the Pantheistic.
4. Write an expository note on the words of Jesus, John 14:9,-"He that hath seen Me hath seen the Father."
5. Compare the Trinitarian and Unitarian conceptions of God.
6. Compare Sovereignty and Fatherhood as the primary and determinative conception of God.

Queen's University Examinations : April, r9o7.

## EXAMINATION FOR B.D.

## Textual Criticism.

I. Discuss the relations of the Curetonian and Sinaitic (Syriac) MSS.
2. Give an account of the preparation of the Latin Vulgate.
3. On what grounds do Burgon and Miller maintain the superiority of the Textus Receptus over the text of Westcott and Hort?
4. What Cod. is the principal representative of the ס-text? State (I) its peculiarities, (2) Blass' theory regarding the origin of the variant readings in the Gospel according to Luke, and the Acts of the Apostles.
5. What MS. mainly represents the $\beta$-text, and why is the supreme authority assigned to it by Hort and Weiss?
6. Transcribe in cursive script, giving breathings, accents, punctuations, the passages indicated in Codd. N, B, D.

Queen's University Examinations : April, 1907.

## B. D. EXAMINATION.

## The Christian Doctrine of Sin.

I. Examine the definition of $\sin$ as "any want of conformity unto, or transgression of, the law of God".
2. Consider $\sin$ as opposed (I) to holiness, and (2) to love.
3. What are the main features of the teaching of Jesus regarding sin?
4. Examine the theory which would account for $\sin$ as derived from man's sensuous nature.
5. What is the teaching of St. Paul in regard to "the flesh"?
6. Examine the theory that regards $\sin$ as a necessary stage in human development.

Queen's University Exammations: April, 1907.

## EXAMINATION FOR B.D. <br> Holy Seripture, N.T.

## I. General.

I. Outline the contents of the Gospel according to Luke, and the Epistle to the Ephesians.
2. Relate (1) Luke's account of the temptation of our Lord, (2) Paul's address to the Athenians, (3) The exhortation to elders by Peter, (4) The message to the Church at Ephesus.
3. Trace the course of Paul's second missionary journey.
4. State the connection of the following :
(I) The last enemy that shall be destroyed is death.
(2) A little leaven leaveneth the whole lump.
(3) He that overcometh shall inherit these things.
(4) I will pray with the spirit, and I will pray with the understanding also.

## II. Special.

i. Narrate the two accounts of the miracle of the loaves.
2. Relate (1) the parable of the mustard seed, (2) the story of the calling of the first four disciples, (3) Jesus' justification of the disciples in plucking the ears of corn on the Sabbath day, (4) the story of Bartimæus.
3. What was the superscription on the Cross?
4. Point out the connection of :
(i) For he that is not against us is for us.
(2) And He marvelled because of their unbelief.
(3) Let the children first be filled.
(4) A prophet is not without honour, save in his own country.
(5) Get thee behind me Satan.

Queen's University Examinations : April, 1907.

## Old Testament Criticism.

Ph. D. Course.

The Primitive History, Gen. I.-XI.
i. Show how Gunkel's statement that each story must be taken by itself applies to this section.
2. Indicate the different sections belonging to the different documents and discuss how far each document as thus represented is a unity.
3. Point out all the duplicates, small or great, in in these chapters.
4. In what sense can the Tower of Babel story be be said to be Babylonian?
5. Discuss briefly Hommel's view that the Babylonian discoverers support the earlier date of P.C.
6. Discuss Sayce's view that the fact that both forms of the Deluge story have points of contact with the Babylonian Flood story tells against the accepted analysis.
7. Discuss the nature of Gen. I.-II. , $4 a$, in relation to (a) Archæological discoveries, (b) Hebrew Theology, (c) Modern knowledge.

The candidate must use his own judgment as to the amount of work attempted, remembering that quality is the supreme consideration.

MEDICINE.

Queen's University Examinations: December, 1906.

## FACULTY OF MEDICINE.

## Physics.

1. Two ropes are attached to a borly at the same point and two men pull on them at right angles to each other with forces of 80 lbs . and 60 lbs . respectively. (ct) What is the resultant force exerted on the body? (b) By how much would the resultant differ if the men had pulled in the same direction?
2. A piece of copper weighs 176 grams in air and 156 grams in water. (a) What is its specific gravity? (b) What is its volume?
3. Describe a common suction or lifting pump and explain its action.
4. Distinguish between conduction and convection of heat, illustrating your statements where vou can by reference to experiment.
5. (a) What do you mean by the (1) principal axis, (2) principal focus, (3) centre of curvature, of a mirror?
(b) An object is placed about 10 cm . from a concave spherical mirror of 6 cm . radius. Show by a drawing the position, size, and character of the image.
6. (a) Two glass plates coloured blue and yellow respectively are placed in the path of a beam of white light from a projection lantern. (b) A glass disc coloured blue and yellow in alternate radial sectors is rotated in the path of a similar beam.

What appears on the screen in each case? Give as fully as you can the reason for the difference.
7. Describe the structure and action of a voltaic cell in which there are two liquids.
S. Describe a complete telegraph system, showing the action of each part.
9. Define the following, showing clearly the relations between them :-Volt, ampere, coulomb, ohm. -
10. Describe as fully as you can the production of Röntgen rays.

Queen's University Examinations : April, 1907.
FACULTY OF MEDICINE.

## - Junior Anatomy.

I. Describe the scaphoid bone of the carpus.
2. Write an account of the nerve supply of the skin of the gluteal region, stating the sources of the nerves concerned.
3. Outline the procedure in the dissection of the axilla.
4. Describe in detail the blood vessels of the foot.
5. Write descriptive nutes on :
(a) the insertion of the semimembranosus muscle.
(b) the posterior primary division of a spinal nerve.
(c) the pubic portion of the fascia lata.
(d) the posterior annular ligament.
(e) the tuberosity of the ischium.

> Queen's U'niversity Examinations: April, 1907.

## FACULTY OF MEDICINE.

## Senior Anatomy.

1. Describe the position and relations of the submaxillary gland and its duct, giving blood and nerve supply.
2. Give the relative position of the structures exposed after removal of the palmar fascia.
3. Describe the broad ligament of the uterus and give relative position of structures between its layers.
4. Give the superficial origin, course and distribution of the glosso pharnygeal nerve.
5. Describe a typical rib.
6. Give position and relations (including peritoneal relations) of rectum.
7. Give an account of the position, relations and extent of the oesophagus.
8. Describe the popliteal artery, giving its relations and the distribution of its branches.
9. Give the naked eye appearance of a transverse section of the spinal cord in the middle of the dorsal region and describe the origin and distribution of a typical dorsal nerve.
io. Describe in full the third ventricle.
Note.-Questions 9 and 10 and any other six constitute a full paper.

Queen's University Examinatzons : April, 1907.

## FACULTY OF MEDICINE.

## Junior Surgery.

1. Define sinus, fistula, chronic abscess. Treatment of $(a)$ irritable ulcer, $(b)$ weak ulcer?
2. Causation, symptoms and treatment of senile gangrene? Preventive treatment of bed-sores?
3. Treatment of simple acute synovitis of kneejoint. Pathological changes occuring in a bone the seat of tubercular osteitis?
4. Gonorrhœa-Give, briefly, treatment for acute anterior urethrits-writing out a prescription for Ardor urinæ.
5. Diagnose fibro-adenoma from carcinoma of breast.
6. Symptoms common to dislocations at shoulderjoint? Treatment of backward displacement of both bones at elbow-joint? Give Allis' direct method of reduction of dislocation on pubes.

Queen's University Examinations : April, 1907.

FACULTY OF MEDICINE.

## Senior Surgery.

I. Diagnose a T-shaped fracture of lower end of humerus.- Treatment of (a) fracture of both bones of leg, (b) of ribs?
2. Symptoms of acute intestinal obstruction? Explain strangulation by bands. Give diagnostic features of acute intussusception.
3. How would you apply taxis for the reduction of an inguinal hernia? Mention some practical points in connection with the fitting on of a truss for the above case.
4. General management of a patient with prostatic hypertrophy. Treatment of external hemorrhoids?
5. Diagnose dislocation dorsum ilii from fracture of neck of femur. Treatment of Pes planus.
6. Diagnostic features of fracture of base of skull.

# Queen's University Examinations : April, 1907. 

FACULTY OF MEDICINE.

## Pathology.-Third Year.

Note.-Answer five questions only.

1. Describe shortly the causation and development of the lesions which lead to (a) stenosis (b) incompetence of heart valves.
2. Describe the blood changes in spleno-myelogenous leukæmia. In a fatal case what are the usual post-mortem findings?
3. Give the distinguishing features of sarcomas. Classify these tumors and describe any one form in detail.
4. Describe the phenomena occurring in an acute inflammation terminating in recovery (resolution) illustrating your answer by a specific example.
5. Describe in detail the characters of the primary lesion of syphilis, its dissemination through the body, and give general features of the later syphilitic lesions.
6. Discuss the process of waxy, amyloid or lardaceous degeneration under causation, nature of deposit, parts attacked and general effects on organs involved.

Queen's University Examinations : April, 1907.

## FACULTY OF MEDICINE.

## Animal Morphology.

I. Describe the changes occurring in a cell during the process of mitosis.
2. Enumerate the cephalic and thoracic appendages of the Crayfish. Describe any one appendage.
3. Outline the course of the blood circulation in the squid.
4. Describe the alimentary canal of the grasshopper.
5. Write an account of the phylum Coelenterata.
6. Describe the reproductive organs of the snail.

Notm-Use diagrams.

Queen's University Examinations : April, 1907.

## FACULTY OF MEDICINE.

## Junior Medical and Surgical Anatomy.

1. Describe the synovial sheaths of the flexor tendons in hand. Explain their significance in the different forms of thecal abscess.
2. Explain in full the deformity which occurs in Potts' fracture.
3. What anatomical points would enable you to confirm your diagnosis in backward dislocation of the elbow joint.
4. Give the action of the tibialis posticus. Discuss its relation to deformities occurring in
(a) talipes equino varus.
(b) talipes valgus.
5. Where is Nélaton's line? What is its importance?
6. Describe the lymphatic drainage of the mammary gland. What bearing has it upon the treatment of malignant disease of the breast?
7. Describe the deformity produced by paralysis of the ulnar-nerve. Explain it.

Note.-Any six'questions constitute a full paper.

Queen's U'niversity Examinations: April, 1907.

FACULTY OF MEDICINE.

## Junior Materia Medica.

1. Define: Extract, Fluid Extract, Tinctura, Suppositorium, Spiritus.
2. Distinguish between the Fixed and Essential Oils. Give the important members of each class, with doses.
3. Name the active constituents of the following crude drugs: Catechu, Belladonna, Cinchona, Senna, Copaiba, Sinapis, Hyoscyamus.
4. Describe the following drugs and give doses : Quinine, Calomel, Sodii Salicylas, Phenacetin, Oxalas Cerii, Ergota, Tinctura Opii, Tinctura Ferri Chloridi, Argenti Nitras, Chloralum Hydratum, Bromoform, Oleum Cadinum, Cupri Sulphas.
5. Describe the action of an Astringent and its principal uses. How does it differ in action from a Caustic and a Styptic? Name the principal vegetable Astringent with its preparations and doses.
6. Give the composition of: Spiritus Ammonii Aromaticus, Easton's Syrup, Basham's Mixture, Syrupus Scillae Compositus, Linimentum Saponis, Mistura Glycgrrhizae Composita, Pulvis Ipecacunhae Compositus.
7. How may the following drugs be administered : Belladonna, Hydrargyrum, Pix Liquida, Menthol, Creosote, Oleum Terebinthinae, Ferri Sulphas, Tannin, Alum, Sulphur.

Queen's University Examinations : April, 1907.

## FACULTY OF MEDICINE.

## Junior Practice of Medicine.

1. Explain the following: (a) Anæmia, Leukocytosis, Lymphocytosis, Eosinophilia. (b) Chlorosis. Give symptoms and differential diagnosis.
2. Lobar Pneumonia : causes; duration; treatment. Differentiate between Lobar Pneumonia and Pleurisy with effusion.
3. Give differential diagnosis between acute Bronchitis and Broncho-Pneumonia. Write out a prescription for the respiratory embarrassment and cough in Broncho-Pneumonia.
4. Atheroma: causes, diagnosis. Discuss its effects upon the system, from a cardiac, a cerebral and a renal standpoint.
5. What physical, clinical and historical evidence would you be likely to get in mitral regurgitation. How recognize and treat broken compensation?
6. Distinguish between interstitial and large lunged Emphysema. Give causes for each. Diagnose Emphysema from Asthma. Give treatment for the paroxysm of Asthma.

Queen's University Examinations : April, 1907.

## FACULTY OF MEDICINE.

## Senior Practice of Medicine.

r. Describe the onset and clinical course of rheumatic fever. Outline your management of a case $(a)$ during attack (b) during convalescence.
2. Write a brief history of influenza. What nervous affections may accompany or follow this disease? Give the symptoms of each ?

3, Give the etiology and diagnosis of exopthalmic goitre. Describe the "Rest Cure" and consider its value in the treatment of this disease.
4. Describe the various modes of onset of chronic pulmonary tuberculosis. Write a short note on the prophylaxis of this disease.
5. Describe the symptoms of the secondary stage of syphilis.
6. Discuss the value of $(a)$ extensor plantar response, (b) intention tremor, (c) Argyll-Robertson pupil, (d) the girdle sensation, as evidences of disease of the nervous system.

Queen's University Examinations: April, 1907.

> FACULTY OF MEDICINE.

## Junior Obstetrics.

Candidates will answer four questions only in Obstetrics, and two questions in Pædiatrics.

1. Describe fully the distribution of the Pelvic Peritoneum.
2. Describe the appearance of the Placenta and Membranes when delivered at term. Why should you examine them? What would you do if you found a portion missing?
3. What symptoms would lead you to think that a pregnant woman would be likely to suffer from eclampsia? In such case what measures would you employ to prevent it?
4. What information should you obtain as to the condition of mother and child at your first visit after a normal confinement ?
5. Describe your treatment of a case of Face Presentation in which the presenting part is still movable above the brim, the os uteri is well dilated and no progress has been made for two hours.

## Padiatrics.

1. How would you treat a case of suspended animation in a child immediately after birth ?
2. What are the points of distinction in the early stages between (a) Measles, (b) Scarlet Fever, (c) Diphtheria?

3, Give the symptoms and treatment of
(a) Tapeworm.
(b) Common round worm.
(c) Thread worm.

# Queen's U'niversity Examinations: April, 1907. 

FACULTY OF MEDICINE.

## Bacteriology.

## [N.B.-Answer six questions.]

I. Given a fresh specimen of pus from an acute abscess, how would you proceed to determine bacteria present and secure pure cultures?
2. Describe the Streptococcus pyogenes under morphological, staining and cultural characters, and give its distribution apart from disease? In what diseases is it most commonly active ?
3. (a) What is meant by an active immunity? Give three ways in which such an immunity can be acquired, illustrating by examples.
(b) Describe shortly the method of preparing diphtheria antitoxin and explain theoretically its method of formation.
4. Describe the characters and means of diagnosis of pus from Actinomycosis. What parts are attacked and how does infection usually originate? Describe shortly the characters of the bacterium.
5. Give the distribution of the Cholera spirillum in body in case of Asiatic Cholera. How would you proceed to make a bacteriological diagnosis and secure pure cultures of the causal spirillum?
6. Describe the morphological, staining and cultural characters of the Tetanus bacillus. Describe its natural distribution and explain its method of action in producing Tetanus in man.
7. Describe (a) the principles of Gram's method of staining, mentioning six bacteria that stain by this method and six which do not ; (b) the principles on which the Widal or serum diagnosis test for Typhoid is based; (c) the meaning of acid-fast bacteria and means of differentiating them.

Queen's University Examinations : April, 1907.

FACULTY OF MEDICINE.

## Diseases of the Eye, Ear, Nose and Throat.

1. Give the symptoms and the treatment of each of the following conditions:
(I) Chalazion.
(2) Phlyctenular Conjunctivitis.
(3) Superficial Ulcerative Keratitis.
(4) Incipient Nuclear Cataract.
(5) Convergent Concomitant Strabismus.
2. State the causes and the treatment of Epistaxis.
3. Draw a picture of the Larynx as it is seen in the throat mirror, and name the different points in view.
4. Explain the functional connection between the nose and ear. What conditions of these two parts are associated and in what way?
5. A child five days old has a great cushion-like swelling of the eyelids of both eyes. The surface of the swollen lids is hot, duskv-red and tense, and the upper lid overhangs the lower and can with difficulty be raised. There is an almost continuous stream of pus from between the lids. The symptoms began on the third day with slight redness of the conjunctiva and a little muco-purulent discharge. Both eyes are affected. What is the trouble? How will you confirm your diagnosis? Treat the case in detail and write in full the necessary prescriptions.

Queen's University Examinations : April, 1907.

FACULTY OF MEDICINE.

## Senior Obstetrics and Gynecology.

(Note.-Six questions only, out of the eight, to be answered, of which three must be obstetrical and three gynecological. All questions of equal value.)

## Obstetrics.

1. Describe briefly the influence which the following diseases has upon pregnancy and parturition.
i. Lobar Pneumonia.
ii. Chronic Nephritis.
iii. Disease of the Cardiac valves (mitral stenosis and aortic insufficiency).
2. Enumerate the causes, and dangers to mother and child, of prolonged second stage of labor.
3. What do you understand by mertia uteri? You are called to attend a multipara with a previous history of post-partum hemorrhage, describe briefly the management of the case.
i. Prophylactic.
ii. To arrest the hemorrhage should it occur.
iii. To combat the dangers arising from a serious loss of blood.
4. Enumerate the indications for the induction of premature labor. Describe the procedure when rapid delivery is necessary.

## Gynecology.

5. Give the causes, symptoms and treatment of acute purulent vaginitis.
6. What is understood by vesico-vaginal fistula ? Enumerate the ways by which it may be produced. Describe the surgical treatment for a chronic case.
7. Describe the appearance of the cervix in a well marked case of chronic endocervicitis.
8. Enumerate the prominent symptoms of a large ovarian cystoma and state how it may be diagnosed from :-
i. Polyhydramnios of pregnancy.
ii. Ascites.

Queen's University Examinations : April, 1907.
FACULTY OF MEDICINE.

Pathology.-Fourth Year.
(N.B.-Answer five questions only.)
I. Discuss the etiology, lesions and terminations of acute broncho-pneumonia.
2. Describe the causation, sites, lesions and terminations of acute intussusception.
3. Classify the cirrhoses of the liver. Describe the causation, lesions and effects of the commonest form.
4. What is the usual nature of enlarged prostate of elderly men? Describe the possible effects of this enlargement on urethra and bladder.
5. Discuss the causation, usual sites, and effects of common cerebral hæmorrhage (apoplexy). What lesions are usually found elsewhere in such a case ?
6. Describe the modes of invasion, lesions and terminations of tubercular arthritis, using knee joint as illustration.

Queen's University Exammations : April, 1907.

## FACULTY OF MEDICINE.

## First Year Biology and Physiology.

i. Classify the protozoa and outline the life history of plasmodium malariæ.
2. Give the general characters of the chordata.

Distinguish the different sub-phyla.
Describe the external parts of a bird.
3. Describe the circulation of the blood in the visceral arches of a bony fish, and indicate the changes which have taken place in the homologous parts of a mammal.
4. Distinguish the two principal classes of articulations, and describe examples of the different kinds of each class.
5. Describe the minute structure of (a) the heart, (b) of a medium sized artery, and (c) of a blood capillary.
6. Enumerate the principal constituents of bile, and specify their relation to the food stuffs, or to other tissues in the body.
7. A man engages in violent athletic exercise. Specify the effects of the unusual exertion upon different functions of the body.
8. Define a nerve centre. Specify some important centres in the brain and medulla. Indicate circumstances which affect the respiratory centre.
9. State the law of specific sensation of nerve fibres, and describe the distribution and endings of the nerves of taste.

Queen's University Examinations : April, 1907.

## FACULTY OF MEDICINE.

## Applied Anatomy.-Fourth Year.

i. What are the symptoms of tumor of the Pons?
2. Name, in some order, the structures underneath the sternum, as far back as the vertebrae.
3. Give surface markings for the spleen and cæcum.
4. Where would pain be felt in morbus coxæ? Account for it.
5. Describe the groups of glands in the axillae, and state the areas drained by each.

Queen's University Examinations : April, 1907.

FACULTY OF MEDICINE.

## Medical Jurisprudence and Toxicology.

(N.B.-Answer five questions only.)
I. Mention and describe where necessary various methods for determining the entire and continuous cessation of the circulatory and respiratory processes.
2. What symptoms are produced by a poisonous dose of chloral. Describe fully your treatment if called to such a case. What is the usual fatal dose?
3. Distinguish between burns and scalds. How does a burn or scald inflicted before death differ from one inflicted after death? How is death brought about by burns?
4. What symptoms are produced by a dose of Paris Green? How would you treat such a case? What post mortem signs would you likely find?
5. (a) Describe fully your method for determining whether a stain is due to seminal fluid.
(b) What is adipocere? How is it formed and under what conditions?
6. What are the usual signs and symptoms in a case of asphyxiation by coal gas. How does it cause death? What post mortem signs would you expect to find? How would you treat a case?
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Queen's University Examinatzons : April, 1907.

## Pharmacology and Senior Materia Medica.

I. Name the acids belonging to the Hydrocarbon series of drugs. Give the preparations and doses. What general effects distinguish the fatty, the aromatic and the acid groups of Hydrocarbons.
2. What parts of the nervous system are affected by each of the following drugs :-Tinctura Aconiti, Tinctura Columbæ, Sulphas Atropinae, Chloral Hydras, Hydrochloridum Apomorphinæ, Potassii Bromidum, Bismuthi Subnitras, Pilocarpinæ Hydrochloridum.
3. Give dose and action of :-Antimonii et Potassi Tartras ; Oleum Terebinthinæ; Zinci Sulphocarbolas; Sodii Salicylas; Vinum Colchici ; Potassii Chloras ; Tinctura Valerianæ Ammoniata ; Amylis Nitris.
4. What are the chief intestinal astringents ? Give the strengths of the chief astringents employed locally.
5. Name the Drastic Purgatives and the Volatile Oils. Give doses.
6. Give the process of elimination and absorption of : Ferrum, Hydrargyrum, Sulphur, Oleum Ricini.
7. What are the constituents of the following crude drugs :- Granatum, Rheum, Prunus Virginiana, Cinchona, Oleoresina, Copaibæ, Hyoscyamus, Ergot.
8. How do the constituents of the following compound preparations affect the system : Mistura Glycyrrhizæ Composita ; Syrupus Scillæ Compositus ; Linimentum Saponis; Spiritus Ammonii Aromaticus; Lugol's solution.
9. Give the Materia Medica and action of Ergot and Scilla.
10. Give the source, dose and action of Diuretin, Adrenalin, Paraldehyde, Diastase.
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[^2]:    *Nute.- Candidates intending to avail themselves of this clause should write the Deputy Minister of Education, stating when and where they wrote, and have their marks forwarded to the Registrar, who will advise them the classes allowed.

[^3]:    *It has been found impossible to arrange for tutorial assistance in either Mineralogy or Geology during the vacation months.

[^4]:    *Nettleship's article on "Plato's Theory of Education" in Hellenica (Rivingtons). is very valuable, but a knowledge of it will not be required.

[^5]:    $\dagger$ See also Caird's article "Cartesianism" in the Encyclopædia Britannica or in his Essays, Literary and Philosophical, Vol. II.

[^6]:    *The Histological specimens required for microscope study can be bought from Thomas Little, Laboratory Assistant for \$r.75.

[^7]:    *This option is for students who intend to take a course in Medicine.

